

THE
CRITICAL AND MISCELLANEOUS
WRITINGS
OF
HENRY LORD BROUGHAM,
TO WHICH IS PREFIXED
A SKETCH OF HIS CHARACTER.

IN TWO VOLUMES.
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BIOGRAPHICAL TREASURY.*

[From the Edinburgh Review.]

WE have upon two former occasions walked through the mighty gallery of portraits which the reigns of the last two Georges furnished out. The figures which we there contemplated were, for the most part, those of the greater men of their age;—men whose genius has raised or adorned their country, and whose superiority, not merely to the bulk of mankind, but to the men whose names sound in the mouths of the multitude is at once confessed as soon as they are mentioned. History, however, performs but half her office, nor perhaps, the most useful portion of it, if she commemorates only those lights of the world, and preserves no lineaments of men whose place is less ambitious, whose merits are more unpretending, but whose virtues, for that very reason, are the more easily emulated; and this may produce a wider and more salutary influence upon the fortunes of future times. The habit of looking down upon useful mediocrity is not founded in any reason, and is apt to produce hurtful consequences. It is fitting, no doubt, that the oratorical efforts of a Fox, a Pitt, a Burke, be held up to admiration—that the ancient virtue and brilliant talents of a Romilly should be handed

* The Biographical Treasury: containing memoirs, sketches, or brief notices of the lives of eminent persons.

down to posterity—and that other ages, as well as his own, should know how justice was distributed by Mansfield, as well as what thunders from Chatham shook the senate and awed the meaner natures of grovelling contemporaries. Justice to those great men is thus consulted, while the natural curiosity of mankind is gratified by the exhibition of their genius; but although the spectacle may kindle in a few congenial minds the desire of emulating their renown, the wonder which it is calculated to excite is all the effect that it can produce upon the great bulk of mankind. They will find it more permanently useful to have displayed before them merits of a less unapproachable elevation—to have their eyes pointed towards heights of excellence, the ascent to which may seem a less hopeless task. An incident which actually happened may illustrate this position.—A young person of good capacity, and who had laboured hard to acquire the knowledge and the habits of composition which oratory requires, and was entering upon a profession where it is to a certain degree essential, never having been present at any display of debating powers, was taken by a friend to witness a great and, as it proved, a very successful exhibition of practised eloquence upon a subject of extraordinary interest. He came away as soon as the speech was closed, and thus addressed his adviser: “I give the ~~whole thing~~ up. This is quite out of the question—for I cannot even form any notion how such things are done.” Had he heard a good third-rate speaker, he would not, in all probability, have arrived at the position in which Gibbon found himself, when the bad speakers filled him with terror and the great ones with despair.

There is only one consideration which makes us hesitate about making this addition to our Gallery. The dislike of mediocrity is great in proportion as the contempt, or affected contempt, for it is ~~universal~~. The giddy multitude, composing the great vulgar, rather than the more natural and rational class of the little vulgar, seem to think that they raise themselves by adopting an extravagant standard of excellence which

they use to measure men's pretensions to fame, and consider that by despising many whom they never can even approach, they exalt themselves to the higher levels of merit. With this insignificant rabble, virtue is its own reward: a strictly honest man in public life passes for little if he be of a middling genius, and have not the faculty of making his name much heard in the world. Hence we are apprehensive that the being ranked in this our second list, will mortify the friends of the parties, when we are sure it would not have offended themselves. But beside this general censure which we have given to such fancies, we may remark, that some will also find their places here whose excellence is of the very highest order;—men who would have infallibly shone amongst the brightest lights of their age, had not their pursuits accidentally led them into the lines of exertion which do not conduct to the pinnacles of fame. It is also to be observed that accidentally some have been omitted in the former series of sketches, to whom we must now render a tardy justice; while some have found their places in that series who can in no respect be deemed to have pretensions above the ordinary run of those whom we are about to describe, and very inferior to some of them. The one with whom we shall begin is an example, and we purposely pitch on it for the first sketch.

Mr. Justice Holroyd was one of the most able, most learned, and most virtuous men that ever in any age adorned the profession of the law. Endowed with feeble spirits, and having never cultivated the gifts of fancy, and probably not possessing any range of imagination, he chose for his study the severer branches of forensic exertion; and by assiduous labour long bestowed upon that dry study, became possessed of all the knowledge of our jurisprudence which industry can acquire, and the greatest natural sagacity marshal. Until the practice is added to the study of the law, the most diligent student cannot be said to have made himself a good lawyer; nor can he even ascertain whether or not he is destined ever to attain that eminence. After he began to plead below the bar, which is the particu-

lar branch of the profession that tends more directly than any other to unfold and to improve the faculties leading to this most desirable station, he soon became known for the conscientious application of his powers and his knowledge to the business he was intrusted with; and both his pupils benefited largely by his instructions, and his clients were comforted with a full and ready assistance in all their difficulties. When he had attained considerable reputation in this walk, he entered Westminster Hall; and soon rose to the first eminence upon that great circuit, which distributes the streams of justice from the centre of the judicial system, through the vast counties of York and Lancaster, and the four northern provinces.

It was soon found that this distinguished person was far indeed from being a mere special pleader. He possessed a clearness and quickness of apprehension, a vigour and firmness of understanding, a just and becoming confidence in his own opinion, that shone through his natural modesty—a modesty singularly graceful, and allied to a most amiable and gentle nature, which neither the contentions of the forum could roughen, nor the severest of studies harden. To whatever branch of investigation he had devoted his life, in that he would have eminently excelled; and as in the stricter sciences he would have been a great discoverer, so he might be truly said to have a genius for law. His views were profound, and they were original. He saw points in a light that was unexpected and felicitous. But he reasoned, and he decided upon no affected conceits, such as Westminster Hall terms crotchets, or fancies, or whims. His admirable judgment always maintained its sway; and his opinion upon all matters submitted to him was still more remarkable for being sound than his reasonings were for being learned and ingenious. A result of all this great merit, which did more honour to him than to the other branch of his profession, was, that although no one enjoyed so high a legal reputation, few gained their professional income with harder labour. Whenever a difficult and important question arose, Mr. Holroyd's opinion was eagerly sought upon all the cases

which grew out of it, or became connected with it; and when ordinary matters of easy solution came into dispute, or where opinions upon questions of course were to be taken in point of form, or where causes were coming into court of which any one could settle the pleadings, or conduct the minor departments of the suit after it came into court, others were selected to perform the easy, every-day, lucrative work; the love of a little patronage operating on the attorney's mind more than a sense of justice. Nothing was more common, therefore than to see this great lawyer answer eight or ten questions upon the construction of a cramp and obscure will; or the course of action fit to be pursued in seeking for the establishment of complicated rights; or the course of pleading most safe in defending nice positions; while ordinary men were in the same time reaping the golden harvest of ordinary business, presenting no kind of difficulty, and level to the most humble capacity.

In court, he of course shone less than in chambers. His figure was low, but his voice was pleasing; until interrupted by an affection of the trachea, which gave him a kind of constant cough for many years, and at last terminated his valuable life. His delivery was, if not striking or commanding, perfectly correct and natural. His style of argument was of the very highest order, although somewhat less venturous in topics, than it ought to have been with so great a jurisconsult, or rather steering too near the defined and bold coast of authority. But his language was choice; his order lucid; his argumentation close; his discussion of cases, and his application of them, masterly;—showing an easy familiarity with all principles and all points, whether recondite or of common occurrence; and a profound judgment in weighing differences and resemblances, and tracing analogies and consequences, which was in vain sought for elsewhere. His famous argument in the case of parliamentary privilege* is truly a master-piece. The history of the law is there traced

through the stream of cases with a superior hand, while the bearings of all authority in favour of the argument are given, with a felicity only equalled by the dexterity with which the adverse cases are got rid of, and their force dissipated. The taste, withal, considering the exciting nature of the subject, is throughout severely chaste; nor can the most fastidious critic descry a spot whereon to fix for blame; while the most zealous enemy of parliamentary oppression cannot find any ground for complaint in the strenuous exertions of the advocate. Arguments like these at once control the judge, as if they came from a higher authority; edify the party in whose cause they are urged; diffuse the useful light of information among the profession; and conserve pure and untainted the most refined taste in composition.

Although the habits of this illustrious lawyer did not often place him, and never voluntarily, in the position of a leader, it yet would occasionally happen that he might conduct some cause of importance before a jury; and then his admirable judgment, ready knowledge of his subject, and all its legal relations, correct taste, and inimitable suavity of temper, united all voices in his praise. His arrangement of the subject, and his diction, were alike perfect; what he wanted in the vigour of declamation, to which he made no pretension, was amply supplied by the combined force of his reasoning and by his luminous statement of facts; nor was he ever engaged in causes which demanded resources of wit or of pathos, the only portions of the rhetorical art to which he neither laid any claim, nor could find substitutes in his own proper stores.

In his conduct at the bar, whether at consultation or in court, whether as a leader or a junior and pleader, he was perfect. No man was more respectful to his leaders when a junior; none less assuming when he led. But though never wanting in courtesy, whichever station he filled, he never failed firmly to assert his own opinion, whether as to the law of the case or the discretion of conducting it, when he had a leader; nor to act with the entire resolution that belonged to his re-

sponsible position when he led himself. In every instance, however, the cause and the client were observed to be his sole object. To advance them was always his aim; to put himself forward, never. The most happy illustrations, the most sound legal topics, were suggested by him quietly, almost secretly, to his leader; from whose far less learned lips came forth, as if they had been his own, the sense of Mr. Holroyd: who, so far from giving the least indication of the sources whence the point had come, only said a word in its support when absolute necessity required.

Having long adorned the bar, he was raised to the bench, chiefly, it was believed, through the exertions of Lord Ellenborough, who had known him intimately, and had always felt for him unbounded respect and esteem. As a judge, he fully sustained the high character which he carried with him from the forum. When he sat at *Nisi Prius*, it was delightful to see the familiar ease with which he handled all points that could be made before him, come they ever so unexpectedly upon him, or be they ever so much out of the every day course of business. The manner, too, in which he dealt with them attracted especial admiration. "Sir," said Mr. Sergeant Hullock, captivated with this, "he is like one of the old men, the great fountains of our law."—"But with a good sense and a just taste, rather belonging to our age than to theirs,"—was the proper and correct addition of one to whom the sergeant's remark had been addressed. The only defect which any one could charge on his judicial performances, was that from which it is so difficult for any one to be free who has been raised to the bench from behind the bar, and without the experience of leading causes. He cannot well take the larger and more commanding view of cases, which the leader naturally adopts, and to which he confines himself rather than to details. Hence, at least before experience of trying many causes has lent such lawyers expertness, they feel some difficulty in grappling with large and complicated cases; are apt to lose themselves in particulars; and are found unable to dispose of more than a very limited number of causes,

however well they may try those which they are able to despatch. To this remark Mr. Justice Holroyd formed no exception. While no man tried a great case better, few so well, he would suffer a heavy cause paper to fall into arrear, from not apportioning his labour justly amongst the more important and more trivial matters. Indeed, except Lord Tenterden and one or two of the later judges raised to the bench before the habits of the pleader had been formed, there are hardly to be found any exceptions to the rule which we have stated, as deduced from long experience of the profession.

Than this eminent and excellent person, no man was more beloved in private life, or could be more justly prized in all its relations. Of the strictest integrity, of unsullied professional honour, of the most sweet and equal temper, whether amidst the cares of private life (nor was he unacquainted with both its sorrows and difficulties,) or in the discharge of his public duties as a magistrate, exposed to the wranglings of the bar, or in the part which he so long took as an advocate among all the contentions of the forum, his good humour was constant and unruled; so much so, that it seemed to cost him no effort at all either to exercise unwearied patience on the bench, or to command his suavity of temper at the bar. Of his valuable arguments, and of his learned and luminous judgments, the monuments remain in the "Term Reports," for the last thirty years of his life; of his eminently expressive countenance, at once sagacious, thoughtful, and mild, a likeness remains in Reynolds' portrait and print. It is only speaking the sense of all Westminster Hall to add, that, as his loss was deeply felt by the profession, so it will be very long indeed, in all probability, before such a great luminary of the law shall arise to shed a light over its dark precincts, and to exalt the glory of the bar.

Contemporary with this great lawyer, and for many years his associate upon the northern circuits, and afterwards for nearly as long his brother upon the bench, was the late Mr. Justice Park, a Scotchman by birth, but who early in life settled in England, where he was

called, when young, to the bar, formed his connexions, and spent his whole life. His diligence as a student having attracted the regards of Lord Mansfield, his natural kindness, and his national regard for Scotchmen, made him patronize the candidate for practice; and under his encouragement, he wrote a useful book upon the law of Marine Insurance—a subject on which at that time some such work was not a little wanted both by mercantile and by legal men. This task he performed very respectably; and, perhaps, the success of the work, and the consequent rise into professional notice of its author, were not impeded by its plainness and want of all pretension, except to explain the subject, and record the points fixed by authority—claiming no praise for originality or profoundness of views, or for any very acute line of remark, either upon the cases or the principles. The same unambitious character marked the author's professional exertions; distinguished him on all occasions from those who affected loftier flights, and attempted the more difficult paths of the ascent; and contributed eminently to the favour which he soon gained and long enjoyed amongst the body of clients.

The plan of writing a Law-Book, as it seems one of the most natural, so it is found to be among the most certain means which an unemployed barrister can take to make himself known, and obtain the emoluments of his profession. After he shall have studied the various departments of our jurisprudence generally, it seems an easy transition to fix his attention upon some one subject which has never been fully illustrated; or never accurately discussed in any separate work; or which has only been handled in books of former days—books which the changes in the law, and the multitude of more recent decisions in the courts, have now made out of date, and comparatively useless either to the student or the practitioner. Time at this period of a professional life is of no value, for the party has no business to occupy it; books are accessible in various ways; the practice of the courts is open to his daily observation; and he can profit by the suggestions and

the experience of his brethren; by his intercourse with others both of his own standing and of his seniors;—an intercourse so easy, by the social habits of the English bar, both in town and on circuit, as to prevent any difference of age or professional rank from interposing obstacles to the fullest communication of doubts or difficulties, and the readiest solution of them. It is equally certain that a successful legal work powerfully assists the rise of the writer at the bar. He is known to have studied one subject at least, and to understand that thoroughly. In cases connected with it, he is taken in as a useful helpmate for the leader, whose knowledge of any branch of law is often comparatively scanty or superficial; nay, the author of such a treatise will often be preferred to much abler and even more eminent men, by the ill-judging zeal of attorneys, or added to them somewhat unnecessarily, by their excessive anxiety for the success of the cause. Hence, this species of authorship has become, like attendance at sessions, or pleading below the bar, one of the avenues to practice; insomuch that the old saying, “There be three roads to success in the common law—sessions, pleading, and miracle”—may well be amended by adding a fourth, hardly less certain than either of the first two—authorship. Of circuit we have said nothing; going any but the very smallest circuits being as little attended with certain success as attendance on the courts of Westminster; and a young barrister, on the northern, or western, or Oxford circuits, being as little likely to obtain briefs if he comes among his ninety competitors for the business done by the remaining ten, unless recommended by pleading connexions, or by sessional practice, or by authorship, as if he took his seat at once on the back rows of the king’s bench or exchequer.

It thus happens that this law-book writing has become a kind of traffic; and has on the part of some dealers been subject to expedients and contrivances incident to other branches of business, and more bluntly than courteously denominated “tricks of trade.” The choice of a subject is the first matter of important consideration;

and herein it is to be observed, that the motives which guide other authors in their preferences, do not much operate in this department of letters. Thus the novelty of the subject is no ground at all of choosing it; on the contrary, it rather is an impediment; because the more new, the less it is connected with matters of frequent occurrence in actual practice. So its difficulty, from the older books and the cases decided in courts being nearly silent upon it, is no ground of preferring any subject. This is, no doubt, a very good reason why some book should be written, because it proves the demand for it; but it is no kind of reason why any given candidate for practice should be the person to supply that demand. For why? His object is not to write a book, but to gain clients, by making himself known as having much studied a particular branch of the law; and business is his object, not book writing, which he only takes as he does his post-horses, to help him on his way to briefs; and unless he shows his knowledge on a subject which is frequently brought into court, he might as well have dead horses, or travel by the stage wagon. Again,—as the book is wholly a secondary, and, as it were, accidental matter in the speculation, it signifies little whether it be very well executed or not, so it be reasonably well done, and without any glaring omissions or errors; for literary fame is no part of the thing sought after,—hardly professional fame,—but only just so much notoriety as may lead to the opportunity of acquiring professional emolument and reputation; and if that can only be obtained through the medium of the authorship, whether the work be a first-rate or very moderate performance, signifies no more than the colour or the pedigree of the horses that shall afterwards take to York the author whom his book has converted into a leader of the northern circuit.

It is not very difficult to perceive, that all these circumstances together, derived from the nature and object of this department of literature, have a direct tendency to lower the excellence of the law books which are now given to the profession; and to explain their great inferiority to the older works which we possess,

handed down from the lights of other days. Instead of a Littleton, a Coke, a Plowden, a Blackstone, a Fearn, all, except one, men who had attained the heights of their profession before they took upon themselves the office of instructing mankind upon its mysteries, the student now becomes our teacher, and lawyers write law books before they have held half-a-dozen briefs. These books, too, being written to gain practice by pleasing the attorney, rather than to gain fame by pleasing the critic, are far, indeed, from being elaborated with diligence, or from displaying the utmost force of their authors; not to mention that time being of incomparably more value than excellence, the object is rather to bring out a middling performance soon enough, to suit the plan of appearing on a particular circuit at a time certain.

We have said nothing of a yet less creditable practice which has flowed from pursuing the same course. As the object is to make a kind of advertisement of the author, to announce him for a person who has attended much to one branch of the law, if this can be effected without any book at all ever appearing, so much the better; the existence of the book being wholly immaterial, except as tending to notify its author to what is technically termed "the other branch of the profession."* Hence many works upon important branches of the law are from time to time advertised as about to be published, which yet never appear. But none of these advertisements are anonymous; the names of the learned authors are affixed in large characters, very legible, on the blue covers of the "Term Reports" and other books which are wont *volitare per ora* of legal men. It would

* The circumlocution of "the gentleman near me"—"the professional gentleman"—"the respectable gentleman by whom I am instructed"—"the other branch of the profession"—are eminently absurd; and how attorneys themselves should be pleased with them, or otherwise than offended at them, it is hard to conceive. In like manner, "solicitor" is often used as more grateful to the ear than plain attorney. Not so thought T. Lowton, who being examined as a witness, when the soft-spoken counsel asked, "You are a solicitor, sir, I believe," would answer somewhat gruffly—"No, I am an attorney." In fact, a solicitor is in Chancery—an attorney in courts of law:

be more easy than gracious to give specimens of this very humble species of legal book-making, if, indeed, it can with any propriety be so termed—

If book it might be called which book is none,
Distinguishable in volume, page, or line,
Or substance might be called that shadow seemed.

Some men have lived awhile on such compositions; their whole authorship being confined to writing four lines of an advertisement, and its direct profits, to the payment of a few pounds for the printing of treatises, of which the conciseness is more remarkable than the honesty.

The work of Mr. Park on “Marine Insurance” is not exposed to all these observations; although unquestionably it was greatly above his, or any other young and inexperienced hand to undertake so large, important, and, in some respects, difficult a subject. Accordingly his book is at the most respectable; it is by no means an excellent performance; and as for its usefulness, although it is the best we have upon the subject, its appearance has in all probability prevented us from having one more adequate to the exigency and importance of the branch of law which it handles. But though a middling work, it had an eminent success. The subject was admirably well selected; the execution was *par negotio neque supra*; and it soon lifted the author to a certain consideration among practitioners. Having now obtained, by Lord Mansfield’s favour, the rank of king’s counsel, he joined the northern circuit, which at that period offered a favourable opening to his business-like talents. Lee had just left it; Wallace was soon after made solicitor-general, and quitted it also; Scott, afterwards so famous under the name of Lord Eldon, had already given up the eastern half, and only came to Lancaster; Law, afterwards Lord Ellenborough, and Cockell, were rising into the lead; and Topping was beginning to make himself known, although he then confined his practice to the circuit, nor had come regularly to Westminster Hall. In a short time Mr. Park obtained a sufficient share of practice to justify his having taken rank, and he soon after began to lead with

Cockell, Law, and Chambre. When Law became attorney-general in 1802, Mr. Park succeeded to the lead, which he retained without a rival, until, in 1815, he was made a puisne judge; for many years, too, he divided that of London and Middlesex with Gibbs and Garrow.

He was a person admirably well qualified for conducting all ordinary business; any thing which required no great display of eloquence—that is to say, the vast bulk of the advocate's multifarious duties. He was no great lawyer, yet possessed abundant knowledge of the common points that occur at *Nisi Prius*; quite enough to become master at consultation with such men as Holroyd, and Richardson, and Littledale, of any thing beyond the matters, chiefly relating to evidence, which occur without notice or the means of preparation: and he had the qualities necessary for taking up at the moment the suggestions of his more learned juniors, in meeting any unexpected objections in court. He had no considerable general knowledge, except that which all men acquire at *Nisi Prius*—the useful knowledge of men; and, accordingly, he was never for an instant above his audience, when he addressed even a country common jury. To eloquence he made slender pretension; but he had an easy flow of plain language, which if it never rose high, nor even was always very correct, yet never sinned against good taste; while his voice was agreeable, neither low nor loud, and yet not monotonous; and his action singularly easy, natural and good. Without any wit, or even humour, he would occasionally make the court laugh; and succeeded in casting ridicule upon an adverse cause or hostile witness, by a broad, laughing, staring kind of treatment, rather set off and borne out by his own good-humoured and animated visage, accompanying his words, than by any thing in those words themselves which could lay claim to affect the hearers. Of the pathetic he was, if possible, yet less a master; and could no more touch the feelings than arouse the passions, or excite a terror by declamation. But, in the stead of eloquence, he had that in which eloquence mainly consists—the power of being or of seeming to be, himself strongly affected; he was earnest, anxious, and agitated; his client was the best

and most amiable of men, and the most injured by far ;—if plaintiff, injured by the advocates of the defendant's conduct—if defendant, by the unexampled atrocity of an action being absolutely brought against him, and dragging the good and dear man into court. The shadow of a suspicion never could cross the jury's mind, that the shadow of a doubt crossed the advocate's, of his case being the very best and clearest that ever came into a court of justice; and such is the magic of real emotion (for in him it could hardly be said to be put on,) that a juror who had smiled during half the harangue, while not yet enclosed in the box, at seeing this continually renewed display of confident feeling in the counsel, no sooner "came to the book and was sworn," than he, too, in his turn, with all his fellows, unless some retired barrister should happen to be among the twelve, fell a victim to the earnest manner and confident wheedling tone of this eminently successful performer.

In dealing with evidence his *forte* chiefly lay; and he did this with much success, whether in examining witnesses or commenting on their testimony. Without the extensive talent for examination in chief which distinguished Mr. Topping above almost all men, and enabled him to paint, through the mouth of his witnesses, a complete, coherent, and vivid picture of his case, Mr. Park could obtain nearly all he wanted; while he almost equalled Mr. Topping in his other great and useful faculty of comforting, restoring and setting up again his witnesses, damaged by the fire of a successful cross-examination. Without the brilliant cross-examination of Mr. Garrow, in one particular line perhaps the most remarkable at the bar, he yet could shake an adverse witness very powerfully; and often in the other department of getting round and surprising a witness, or seducing him into admissions, could obtain from him more than Mr. Garrow himself could by such a stratagem; of which he was a less skilful master than of fierce assault.

His discretion in the conduct of a cause was great; his judgment being sure, and his command of himself, generally speaking, perfect; and his devotion to the cause—the single object of getting the verdict—absolute and entire. With the court he always endeavoured to

make friends, and for the most part with success; with his clients his decorum was becoming, not harsh or supercilious, nor yet crouching; with his professional brethren his manner was unexceptionable,—showing neither fear of his superiors, jealousy of his equals, nor haughtiness to his inferiors. His temper, partly through long and painful disease, was occasionally irritable, but never violent, nor ever testy, nor even peevish. He had his little weaknesses, like other men, which at the bar, and still more afterwards on the bench, afforded matter of good-humoured merriment; nor was he himself apt to be offended when the laugh resounded “at his own proper cost and charge.”

As he was in Westminster-Hall, so he proved when he became a judge—excellently suited to the ordinary demands of business; though occasionally found less equal to great occasions, chiefly of a legal kind. He could despatch the business of a heavy circuit with great satisfaction to both the bar and the suitors; and even in his latter days, when nearly threescore and ten years of age, in trying a great will cause,* he showed a vigour of body and acuteness of mind, extraordinary certainly for any period of life;—summing up the evidence, after six or seven days’ trial, in an address which lasted with unbroken fluency from mid-day to past midnight. This cause also exhibited one of his worst weaknesses: that of taking an early and unalterable bias, arising from an amiable belief in some party’s good faith, or, it might be, a laudable indignation at some other party’s misconduct. He suffered this to influence him, and throughout the long trial, made every thing bend to it; and really mistook, perversely, though most unintentionally, the drift of the proofs adduced, in order to make the whole chime in with his scheme of the transaction. He was at heart a just man, however; and never suffered himself to be led away by any partiality towards counsel; neither showing the least apprehension of the most powerful leaders, nor the least prejudice in favour of one over another. No advocate, were he ever so powerful in himself, or so popular in his

* *Wright v. Tortham.*

following, could hope to intimidate him; none, be he ever so obsequious, might expect to wheedle him into an act of unjust favour.

The opinions of Mr. Justice Park were all along those of a high tory in church and state. He never mingled in politics, and therefore could be only indirectly and accidentally known as a party man. But his religious principles were strong, and the fervour of his devotion great. He seemed to love the church as by law established, fully as much as he did the religion to preach which it is maintained; and he regarded a departure from the doctrines and discipline of the hierarchy, with feelings of as much alienation, not to say repugnance, as one from the creed of the dispensation itself. The only occasions, out of the profession, on which he appeared as an author, were connected with his religious or his ecclesiastical feelings. He published a tract exhorting to the sacrament, called, "The Benefit of Frequent and Early Communion;" and he printed, for private circulation, a biographical sketch of an old gentleman, long secretary of Queen Anne's bounty, and chiefly remarkable for that which assuredly obtained for him the somewhat equivocal blessing of so learned a biographer,—his old-fashioned, steadfast, dogged adherence to the establishment in all its parts, and his aversion to all forms and shades of dissent.

The contemplation of Mr. Justice Park's rise and success in life is calculated to be of material service; and to exercise a salutary influence over the minds of by far the most numerous class of well-educated society. His talents were not above mediocrity,—unless that he was endowed with natural quickness, and had some power of steady application. He had nothing profound in the cast of his thoughts; nothing remarkably perspicacious; no fury, no fire, no natural dignity or grace, except what a good voice and an unconstrained action bestowed. He had amassed no store of legal learning; he had no classical, no scientific attainments; he was without fortune, without rank, without any political or other powerful connexions. Yet did he live as happy and as respectable a life for above half a century that

he was in the profession, as any man could desire; and after having been one of its leading members, he sat for four-and-twenty years on the bench, with the just reputation of being a good judge. He enjoyed large emoluments, high rank, and general respect. To what did he owe these valuable possessions? To no rare genius, or even great talents, or extraordinary accomplishments, but to prudent conduct; sufficient but not excessive industry; steady attention bestowed upon one object—that object being his profession; from which nothing either in politics, or in literature, or in amusement diverted him; to uniform suavity of demeanour; to constantly making in business the success of his cause the paramount object; and never being drawn aside from the point of his clients' interest by any selfish feeling of feeding his own vanity, or making any sacrifices either to amusement or to display. Such sacrifices, such gratifications, may with more safety be indulged, when the gifts of genius or commanding eloquence accompany the more homely powers which common business requires. Even then they are perilous relaxations from the severity of forensic discretion. But where such rare endowments are wanting, their place being supplied by prudence and by conduct, the ample measure of success which Mr. Justice Park reached may be pronounced as of tolerably certain attainment.

Among those whose names have been incidentally mentioned in portraying Mr. Justice Park, is Mr. Abbott, afterwards Lord Tenterden;—a man of great legal abilities, and of a reputation which, though high, was by no means beyond his merits. On the contrary, it may be doubted if he ever enjoyed all the fame that his capacity and his learning entitled him to. For he had no shining talents; he never was a leader at the bar; his genius for law was by no means of the depth and originality which distinguished Mr. Holroyd; nor had he the inexhaustible ingenuity of Mr. Littledale; nor perhaps the singular neatness and elegance of Mr. Richardson. His style of arguing was clear and cogent, but far from brilliant; his opinions were learned and satisfactory, without being strikingly profound; his advice, however,

was always safe, although sometimes, from his habitual and extreme caution, it might be deficient in boldness or vigour. The course of publication, so successfully pursued by Mr. Park, was likewise adopted at a subsequent period by Mr. Abbott, but after he had secured his place among special pleaders: it accelerated his rise in the profession, but did not cause that rise. His subject, the "Law of Shipping," was well calculated to interest both lawyers and traders; and the merit of the work is much superior to that of Mr. Park. It displays far greater learning; is better arranged; more fully handles the subject, and is better written. It is to be classed amongst the standard works in our law; whereas Mr. Park's only receives the humbler praise of having filled up reasonably well an acknowledged blank in the legal library.

With these qualifications for the profession, with the respectful demeanour towards his superiors, and especially the court, which he always maintained in some excess, and with the principles of an Oxford tory, as well as the standard accomplishments of an Oxford scholar, also in considerable excess, it was to be expected that he should make his way steadily at the bar. He was first a successful pleader; then a barrister well employed in the junior departments of the profession; a favourite first in the Oxford circuit, and afterwards in Westminster Hall; finally, the standing council to all the great government departments; and besieged late and early by clients desiring his advice both upon their cases and their pleadings. As a leader, he very rarely, and by some extraordinary accident only, appeared; and this in a manner so little satisfactory to himself, that he peremptorily declined it whenever refusal was possible. Indeed he showed none of the capacity which distinguished Mr. Holroyd, where the same unwelcome chance befell him; for he seemed to have no notion of a leader's duty beyond exposing the pleadings and the law of the case to the jury, who could not comprehend them with all his explanation. His legal arguments, of which for many years the books are full, were extremely good, without reaching any very high pitch of excellence;

they were quite clear, abundantly full of case law; betokening some dread of grappling with principle, and displaying none of the felicitous commentary that marked Mr. Holroyd's.

Like most English lawyers, he married early in life, and lived wholly in his own family; associating less with his brethren at the bar than any man of the day. But his hours of relaxation were not passed in idleness. The classical acquirements, in which he surpassed most men, formed the solace of his leisure; and to the end of his life he not only had a high relish for such pursuits, but wrote Latin verses with peculiar elegance and perfect ease. What is far less rarely met with,—especially added to such tastes and such acquirements,—he was well versed in natural philosophy, particularly in the various branches of mechanical science. Nor did any one out of the trade better understand all the details of machinery, in examining which his accurate mind took a peculiar pleasure.

Although his reputation at the bar was firmly established for a long course of years, it was not till he became a judge, hardly till he became chief-justice, that his merits were fully known. It then appeared that he had a singularly judicial understanding; and even the defects which had kept him in the less ambitious walks of the profession,—his caution, his aversion to all that was experimental, his want of fancy,—contributed with his greater qualities to give him a very prominent rank, indeed, among our ablest judges. One defect alone he had, which was likely to impede his progress towards this eminent station; but of that he was so conscious, as to protect himself against it by constant and effectual precautions. His temper was naturally bad; it was hasty, and it was violent; forming a marked contrast to the rest of his mind. But it was singular with what success he fought against this, and how he mastered the rebellious part of his nature. It was, indeed, a study to observe this battle, or rather victory; for the conflict was too successful to be apparent on many occasions. On the bench it rarely broke out; but there was observed a truly praiseworthy feature, singularly

becoming in the demeanour of a judge. Whatever struggles with the advocate there might be carried on during the heat of a cause, and how great soever might be the asperity shown on either part, all passed away—all was, even to the vestige of the trace of it, discharged from his mind, when the peculiar duty of the judge came to be performed; and he directed the jury, in every particular, as if no irritation had ever passed over his mind in the course of the cause. Although nothing can be more manifest than the injustice of making the client suffer for the fault or the misfortune of his advocate,—his fault, if he misconducted himself towards the judge—his misfortune, if he unwittingly gave offence; yet, whoever has practised at *Nisi Prius* knows well how rare it is to find a judge of an unquiet temper, especially one of an irascible disposition, who can go through the trial without suffering his course to be affected by the personal conflicts which may have taken place in the progress of the cause. It was therefore an edifying sight to observe Lord Tenterden, whose temper had been visibly affected during the trial (for on the bench he had not always that entire command of it, which we have described him as possessing while at the bar,) addressing himself to the points in the cause with the same perfect calmness and indifference with which a mathematician pursues the investigation of an abstract truth; as if there were neither the parties nor the advocates in existence, and only bent upon the discovery and the elucidation of truth.

His eminence as a judge was great and undeniable: it was in a short time confessed by all, even by those who had some prejudice against him at first, from marking the extreme contrast between him and his more brilliant predecessor; and from the impression, generally prevailing, and in general well founded, that men who never have led causes at the bar make indifferent judges, and are unequal to the despatch of judicial business. Lord Tenterden from the first displayed great judicial capacity; yet it is certain that, for some time, he formed no very remarkable exception to the rule. He took no general and comprehensive view of a case; he exa-

mined its details part by part; he did not, like a leader, *get up on an eminence, and from thence survey the subject in all its bearings*; nor was he aware of the relative importance of its different portions. But in order to perform his office, he would select one particular compartment, and he would choose not the most difficult. To this he bent his attention, and seemed a good deal troubled, and even impatient, if it were drawn away to other points not within the limits which he had chosen to trace. It is remarkable not only how this habit wore off, instead of being confirmed and extended; but also how great a start he made in improvement after he had been five or six years chief of his court; and, on the occasion of a long and severe illness, that seemed to render his retirement from the bench inevitable. His temper was softened; his attention became more comprehensive; he viewed things more upon an enlarged scale; his industry was not relaxed,—increased it could not be; and during the last seven or eight years of his time he exhibited a very eminent instance of great judicial capacity. At all times his law was safe, and accurate, and ready; but he could now deal far more ably with facts. He never was without great influence over the jury; but as he now could enlighten their minds more fully, his weight was increased. His patience became greater as his sway over the bar was extended; and as men compared the somewhat violent despatch of the preceding reign with the more deliberate march of justice while he was her minister, they deemed the greater vigour and more manly capacity of his celebrated predecessor well exchanged for the fuller and more satisfactory discussion of all causes during his rule. It is true that fewer cases were despatched, and the paper fell into arrear; but there is something better than speedy decision; and that is substantial justice, which requires full hearing before judgment.

It may, indeed, be well questioned if ever Lord Ellenborough could have despatched the business of the Guild-Hall Sittings with the same celerity that marked his reign, had he survived to the later times. The suitors as well as the bar were no longer the same body, with

whose interests and with whose advocacy he had to deal. In his time, the whole city business was in the hands of Gibbs, Garrow, and Park ; with occasionally, as in the cases of the Baltic risks, the intervention of Topping;* and it was a main object with them all to facilitate the despatch of business. This they effected by at once giving up all but the arguable points of law, on which they at once took the judge's opinion ; and the maintainable questions of fact, on which they went to the jury. Fifteen or twenty important causes were thus disposed of in a morning, more to the satisfaction of the court and the benefit of the counsel, than to the contentment of the parties or their attorneys. It is true that no real loss was, in the vast majority of instances, sustained by any one through this kind of arrangement, while the time of the public was saved. But it is equally true that every now and then a slip was made and a benefit lost ; and that nothing can guard against such accidents but the right course of thoroughly sifting each case, as if it were the only one in which the advocate was retained, or which the judge had to try. Nor must it be forgotten that the right decision of causes is only one, though certainly the most important office of justice. Another, only second in reputation to that, is the giving parties satisfaction,—such satisfaction as is enough for reasonable persons. Now, as every person is impressed with the idea that there is but one cause in the world ; and that his own, however unmindful of this the court and the counsel may be, discontent, heart-burnings, feelings of injustice suffered, desire of redress in other ways, and among these, often-times by means of other

* The mention of this most honourable man, in connexion with those cases, recalls an incident so creditable to himself, and to the renowned profession to which he belonged, that it ought not to be passed over in silence. A general retainer of a thousand guineas was brought to him, to cover the Baltic cases then in progress. His answer was, that this indicated either a doubt of his doing his duty on the ordinary terms known in the profession (one guinea particular, and five guineas general retainer,) or an expectation that he should do something beyond the line of his duty, and therefore he must decline it. His clerk then accepted of the usual sum of five guineas, and he led on these important cases for the defendants.

suits, is sure to be left in the train of Themis, when the pace she moves at is too rapid for ordinary eyes to follow, and breaks through the surrounding ties and feelings of interests too rudely. Hence, the despatch effected is frequently more apparent than real; of which a remarkable example used to be afforded by Sir John Leach, whose swift decisions, without hearing, only produced appeals to the Great Seal. But in whatever way these opinions may be disposed of, one thing was certain;—the kind of arrangement which has been described as prevailing among the leaders in Lord Ellenborough's time could only be found practicable as long as the lead should be confined within a very few hands. When it was at all scattered, such a thing was altogether out of the question: and in Lord Tenterden's time this distribution undeniably took place.

It may be supposed from what has been said of his scientific as well as classical acquirements, that, in trying causes where these accomplishments could be displayed, he rose above the ordinary level of his great merit. To see him preside over a complicated patent case, was a very great treat, whether to a lawyer or a man of science. It was a singular exhibition of legal combined with mechanical skill,—each keeping within its proper sphere, but each conspiring with the other to obtain the full investigation of the cause in all its bearings, and its clear elucidation to the jury. He it was, too, who first leaned against the absurd, unjust, and mischievous refinements by which almost all former judges conceived it fit that they should display a constant astuteness to defeat the claims of a patentee, upon the unreflecting notion of his right being a monopoly, and the public interest being damaged by it; wholly forgetting that his genius and labour had been first given to the public in reversion to purchase the temporary possession of that monopoly.

The merits of this distinguished judge having been recited, it is fit that we advert to his few defects. These were borrowed from his temper in part; and in part transferred from the professional habits of his limited walk while a practitioner. He never could en-

ture the "trick" of the bar, as displayed in its leading advocates; nor was there any great harm in this, had it stopped here. But he seemed always to suppose that an address to a jury could be framed on the model of a special plea, or the counts of a declaration, only without the prolixity and repetition habitual with pleaders; and to forget that the surest way of bringing out the truth in any case, is to let the conflicting feelings and interests of parties come into their natural collision. His impatience was thus very manifest; and had his nerves been in the same proportion firm as his dislike to declamation and illustration was strong, a struggle would have ensued in which the eloquence of the bar would either have been extinguished, or have silenced and discomfited the bench. In like manner, when during the interlocutory discussions with the counsel, whether on motions in Banc, or on objections taken before him at *Nisi Prius*, he was uneasy, impatient, and indeed irascible, at nothing so much as at cases put by way of trying what the court had flung out. Being wholly void of imagination to supply cases in reply, and even without much quickness to sift the application of those put, he often lost his temper, and always treated the topic as an offence. But it was chiefly in obstructing cross-examination, which he wholly undervalued, from his utter incapability of performing his part in it, that his pleader-like habits broke out. Had he been submitted to in this matter, cross-examination would have been only known as a matter of legal history. His constant course was to stop the counsel, by reminding him that the witness had already said so: or had already sworn the contrary, and this before the question was answered; to which it was natural, and, indeed, became usual, for the counsel to make answer that this was the very reason why the question had been asked; the object being either to try the witness's memory, or to test his honesty.

It must be admitted that, in all these respects, the position of a judge while sitting at *Nisi Prius*, is somewhat anomalous. He presides, indeed, over the whole proceedings; but the jury holds *divisum imperium*; and he sits there as the nominal chief, while the advocate is

sometimes dealing with the witness as if no judge were present, and sometimes addressing the jury, careless whether the judge hears him or not;—equally indifferent whether he approves or disapproves what he says. Princes, it is said, cannot allow any one to address another in their awful presence; nay, the code of etiquette has embodied this feeling of sensitive royalty in a rule or maxim. The ruler of the court, has as little love of a proceeding which, in the prefatory words, “May it please your lordship,” seems to recognise his supremacy; but in the next breath leaves “his lordship” as entirely out of view, as if he were reposing in his bed, or gathered to his fathers. Few judges, accordingly, are so considerate as to be patient of eloquence, whether in declamation or in witty illustration; few regard these flights otherwise than as in derogation from the respect which is their own especial due. To address passions which they are forbidden to feel—to contemplate topics that must be suited to any palate rather than theirs—to issue jokes by which they ought not to be moved while all others are convulsed—seems incompatible with their station as the presiding power, or a violation of that respect which it ought to inspire. Lord Tenterden, more than most judges, appeared to feel this; and it was a feeling wholly founded in a forgetfulness of the very nature of jury trial, as it was unworthy of his solid sense and great sagacity. In the distribution of criminal justice, the case is widely different. The anxiety necessarily attendant upon the judge’s highly responsible office here leads him to court all help from the ingenuity of counsel. Before the addressing the jury was allowed in cases of felony, the chances of collision were of course more limited; but even now nothing of the uneasy feeling to which we have been adverting has been found to have taken place since the recent change of the practice in criminal courts.

It was a considerably greater fault than any we have noted, and proceeded from a much less creditable cause, that Lord Tenterden showed no little variety of firmness and of temper on different occasions and towards different persons. Of him, it might be said, that he had

a different measure of patience and courtesy for different classes, even for different individuals. It could not be said of him, that he was no respecter of persons. The bar felt this somewhat; the witnesses felt it more; the parties never felt it at all. Its scope was confined to the mere accident of outward behaviour and manners; nothing beyond that. When, on one occasion, he had, with some roughness, addressed to a witness, who was looking another way, an advice not unusual with him, and not very delicately couched, "to hold up his head, and speak out like a man," it was amusing to observe the fall of both countenance and voice when the witness turned upon the judge the face of the chairman of the honourable East India Company.

If from this, and from his known opinions in church and state, it should be inferred that he was obsequious to power—or made himself more an instrument of convicting libellers than all, or nearly all, have done who have filled his exalted station—a great mistake would be committed. That he acted up to the general standard of dislike towards the licentiousness of the press; that he overstepped with them the true bounds of that dislike, and with them confounded free with criminal license—is as certain as that he did by no means outstrip them in his warm affection for tame and decorous writing. But although this is undeniable, it is equally certain that he performed his part more successfully than Lord Ellenborough; because more skilfully and more temperately; nor could any thing have been more unfortunate for the press in this country, than that, under his administration of the criminal law, attempts should have been made to put it down by prosecutions; because few things which never happened can be more certain, than that he would have obtained many a verdict of conviction where his vehement predecessor would have failed.

We have omitted to mention one quality that eminently distinguished Lord Tenterden; and the omission has been designed. We allude to the regularly correct, succinct, and appropriate language in which his statements and his reports were clothed. In this kind of

diction he was surpassed by none; and hardly equalled by any. No doubt his success in expressing his ideas was in part owing to his avoiding all large or venturous matters, and confining himself within limits not difficultly surveyed and scanned. But within that range his diction was extremely happy. When he, for the first time, appeared in political affairs, this distinguishing excellence was shown with considerable effect. The judges attending the scandalous mockery of justice, falsely called the queen's trial, in 1820, were represented by Chief-Justice Abbott, he not then having been raised to the peerage. Many occasions arose for putting questions to those learned persons, and their answers were returned through their learned chief. The correct and luminous language in which these opinions were couched, drew forth universal applause; the soundness of some of the opinions may be well doubted; nor can the most remarkable decision to which the cause gave rise—that upon questioning a witness as to what he had before written, without showing him the paper, if any there were*—be defended upon any principle, or regarded as otherwise than founded on a gross fallacy. This seems now to be pretty generally admitted, although, unfortunately, the rule is still acted upon as law by all the judges.

: Here began, and here ended, the success of this eminent lawyer in political life.—When raised to the peerage, in 1827, he took no part in public affairs, beyond entering his strong protest in the debate, and giving his vote in the division against the reform bill. But he was the author of some improvements of much value, in that important part of the law which relates to the limitation of actions. By two bills which he introduced and carried through, the statute which limits actions, has first received a truly beneficial application, a new promise in writing being required to evade the statute; and the claims of the church were, by his other bills, for the first time, made subject to any limitation at all. Other

* This *if*, were there no other argument against the rule laid down, completely destroys its foundation.

rights are also required to be prosecuted within a specific time; though the structure of this portion of his second bill is liable to many objections. It is known that he particularly valued himself upon his skill and diligence in framing statutory enactments. His title to the latter praise is unquestionable, for he bestowed on his draughts the greatest pains. His skill is much less conspicuous; although one might have expected him to display uncommon excellence in this department, who had pronounced so severe, and, it must be admitted, so just a sentence upon the works of the legislature, as to declare, that though not "*inops concilii*, it seemed to be *magnas inter opes inops*."

It is not possible to find a more marked or a wider contrast between two men in any department, than was presented by the two succeeding Chief-Justices of England, one of whom we have just been endeavouring to describe; and the task of describing his predecessor is, in consequence of this great diversity, far easier. Instead of the cautious circumspection which we have been tracing, in all its forms and consequences, Lord Ellenborough despised even much of what goes to form ordinary discretion; and is so much over-rated by inferior natures as the essence of wisdom, but so justly valued by calculating ones as the guarantee of success. Of compromise, whether regarding his opinions or his wishes, he knew not the meaning; of fear, in any of its various and extensive provinces, he knew not even the name, or, if he saw its form, yet he denied its title, held its style in mockery, and would not, even for an instant, acknowledge its sway. Far, indeed, from cradling himself within the details of a subject, he was wholly averse to such narrow views of particulars; and took a large and commanding survey of the whole, which laid open before him all its parts and all their relations. Bred a pleader, he however, on coming to the bar, early showed that he only retained the needful technical knowledge which this preparatory practice had bestowed on him; and he at once dashed into the leading branch of the profession. The famous case of Mr. Hastings—the opprobrium of English justice, and, through mis-

management and party violence, the destruction of the greatest remedy afforded by our constitution—soon opened to Mr. Law the highest walks of the bar. He was the defendant's leading counsel; and his talents, both as a lawyer and a speaker, shone forth conspicuous even upon that great occasion of oratorical display: the only fruits produced by this proceeding, so costly to the country, so much more costly still to the free constitution of England.

He soon rose to the unrivalled lead of the northern circuit, to which, by birth, he belonged; his father being Bishop of Carlisle, and himself being born at the village of Salkeld,* in Cumberland. In Westminster Hall he had also good success, though he never rose there into the first lead; having indeed to contend with able advocates, and among them, with Erskine, the greatest of all. Lord Kenyon, whose favour for this illustrious ornament of his court we have already had occasion to remark, was supposed, or was felt by Mr. Law, to be partial more than became him to this formidable antagonist; and a quotation to which this feeling gave rise, is often cited, and justly, as singularly happy. Mr. Erskine had been, somewhat more than was his practice with any adversary, triumphing over him, when Mr. Law, first addressing him and then Lord Kenyon, thundered forth these fine, and expressive, and singularly applicable lines, with the volume of tone which he possessed beyond most men—

—Non me tua fervida terrent
Dicta ferox; Di me terrent et Jupiter hostis.

Here he bowed sarcastically to the chief-justice, while he dwelt and paused upon the name of the heavenly archetype.

As a lawyer, without being very profound, and confining his learning to the ordinary matters of common law, he yet knew quite enough for ordinary occasions;

* This village is now remarkable as the residence of Mr. Gaskin, a man of the most sterling merit as an astronomer and maker of exquisite telescopes; father of the tutor of Jesus' College, Cambridge, so well known for his mathematical accomplishments.

and afterwards, as generally happens with able men, greatly extended his information when raised to the bench. As an advocate, he was vigorous, impressive, adventurous; more daring than skilful; often, from his boldness, not a safe leader; always despising the slow progress, the indirect avenues to victory, which the rules of art prescribe; always preferring to vault over obstacles, follow the shortest line, and cut the knot rather than waste time in untying it. But he could powerfully address the feelings, whether to rouse indignation at cruelty, or contempt at fraud, or scorn at meanness. For his own nature had nothing harsh in it, except his irascible temper, quickly roused, as quickly appeased; his mind was just, abhorring any deviation from equity; his nature was noble, holding in utter contempt every thing low or base: his spirit was open, manly, honest, and ever moved with disgust at any thing false or tricky; his courage was high, leaving him more scorn than compassion for nerves less firm than his own. Nor was it only the thunder of his fierce declamation—very effectual, though somewhat clumsy, and occasionally coarse—with which he could prevail against an adversary, and master an audience. He had no mean power of ridicule—as playful as a mind more strong than refined could make it; while of sarcasm he was an eminent professor, but of the kind which hacks, and tears, and flays its victims, rather than destroys by cutting keenly. His vigorous understanding, holding no fellowship with any thing that was petty or paltry, naturally saw the contemptible or inconsistent, and so ludicrous aspect of things; nor did he apply any restraint on this property of his nature when he came into stations where it could less freely be indulged. His interrogative exclamation, in Lord Melville's case, when the party's ignorance of having taken accommodation out of the public fund, was alleged—indeed was proved—may be remembered as very picturesque, though perhaps more pungent than signified. “Not know money? Did he see it when it glittered? Did he hear it when it chinked?”

On the bench, he had the very well-known but not

very eloquent Henry Hunt before him, who, in mitigation of some expected sentence, spoke of some who "complained of his dangerous eloquence"—"They do you great injustice, sir," said the considerate and merciful chief-justice, kindly wanting to relieve him from all anxiety on this charge. After he had been listening to two conveyancers for a whole day, of a long and most technical argument, in silence, and with a wholesome fear of lengthening it by any interruption whatever, one of them, in reply to a remark from another judge, said, "If it is the pleasure of your lordship that I should go into that matter."—"We, sir," said the chief-justice, "have no pleasure in it any way." When a favourite special pleader was making an excursion, somewhat unexpected by his hearers, as unwonted in him, into a pathetic topic,—“An't we, sir, rather getting into the high sentimental latitudes now?"

It was observed with some justice, that his periods occasionally, with his manner, reminded men of Johnson. When meeting the defence of an advocate for a libel on the prince regent, that it had been provoked by the gross, and fulsome, and silly flattery of some corrupt panegyrist—"What," said he, "an offence against the law of the land, provoked by an offence against the laws of taste! How frail is the tenure by which men hold their reputation, if it may be worn down and compromised away between the mischievous flattery of fulsome praise, and the open enmity of malignant abuse." But it was observed with much less correctness that his sarcasms derived adventitious force from his Cumberland dialect. From his manner and voice both powerful, both eminently characteristic, they assuredly did derive a considerable and a legitimate accession of effect. But his dialect was of little or no avail; indeed, except in the pronouncing of a few words, his solecisms were not perceivable. It was a great mistake to suppose that such pronunciations as *Marchant*, *Hartford*, were provincial; they are old English, and came from a time when the spelling was as we have now written the words. He was of those, too, who said "*Lunnun*" and "*Brummagem*;" but this too is the good old English

dialect, and was always used by Mr. Percival, who never crossed the Trent except twice a year, going the Midland circuit. Mr. Fox, a lover of the Saxon dialect, in like manner, always so spoke—and preferred Caees and Sheer, and Groyne, to Cadiz, Shire, and Corrunna.

When his powerful mind was brought to bear upon any question that came before him, when sitting alone at *Nisi Prius*, or with his brethren in Banc, the impression which he made upon it was immediate, sure, and deep. Sometimes it required the modification of the whole court revising what he had done alone; sometimes the interposition of his fellows sitting with him; but its value was always great, and no man doubted the energy or could avoid feeling the weight of his blows.

The books are perhaps not the only quarters whither we should resort to find the memorials of a chief-judge's learning or talents for transacting judicial business. All that relates to sittings and circuits—that is, nearly two-thirds of his judicial labours, and by far the most important portion of them—leaves no trace whatever in these valuable repertories of legal learning. Yet the Term Reports bear ample testimony to the vigour of this eminent individual's capacity, during the eighteen years that he filled the first place among the English judges.

His manner has been already mentioned in one particular. It was much more faulty in another. He was somewhat irascible, and occasionally violent. But no one could accuse him of the least partiality; his honest and manly nature ever disdained as much as to trample overbearingly on the humble, as to crouch meanly before the powerful. He was sometimes impatient; and, as his mind was rather strong than nimble, he often betrayed hastiness of conclusion more than he displayed quickness of apprehension. This slowness was shown by his actually writing his speeches for many years after he was a leader; and to the end of his professional life, he would occasionally commit to paper portions of even his intended reply to the jury. It was a consequence of this power of his understanding, and of his uniform preference of the plain, sound, common-sense views which vigorous minds

prefer, that refinements or subtleties were almost as little to his liking, as to the taste of his more cold and cautious successor. But he was not so much disturbed with them. They gave him little vexation, but rather contributed to his mirth, or furnished fuel for his sarcastic commentary. "It was reserved (said he, respecting a somewhat refined and quite a new gloss upon a well known matter)—"It was reserved for the ingenuity of the year 1810, to hit upon his crotchet."

In his political opinions, Lord Ellenborough was originally like the rest of his family, a moderate whig. But he never mingled in the associations or proceedings of party; and held an independent course, with, however, considerable disinclination, at all times, to the policy and the person of Mr. Pitt. He joined Mr. Addington's administration as attorney-general, and came into parliament, where he did not distinguish himself. Lord Kenyon's death soon after made way for him on the bench; and he was, at the same time, raised to the peerage. The quarrel between that administration and Mr. Pitt did not reconcile him to that minister: and against Lord Melville he entertained a strong personal as well as party prejudice, which broke out once and again during the proceedings on his impeachment. The accession of the whigs to power, in 1816, was accompanied by their junction with Lord Sidmouth, and, as he required to have a friend in the strangely mixed cabinet, the unfortunate choice was made of the first criminal and common law judge in the land, of whom to make a political partisan;—he whose high office it was to try political offences of every description, and among others the daily libels upon himself and his colleagues. This error has even been deemed one of the darkest pages of whig history. Mr. Fox made a dexterous and ingenious defence, quoting a few special precedents against the most sound principles of the constitution; and defending an attempt at corrupting the pure administration of criminal justice by appeals to instances of civilians and chancery lawyers sitting in parliament. But Lord Ellenborough's own son lately took occasion honestly to state that his father had told

him, if it were to do over again, he should be no party to such a proceeding.

On the bench, it is not to be denied that he occasionally suffered the strength of his political feelings to break forth, and to influence the tone and temper of his observations. That he ever, upon any one occasion knowingly deviated one hair's breadth from justice in the discharge of his office is wholly untrue. The case which gave rise to the greatest comment, and even led to a senseless show of impeachment, was Lord Cochrane's. We have the best reason to know that all who assisted at this trial were in truth convinced of the purity with which the judicial duties were discharged, and the equality with which justice was administered. Lord Ellenborough was not of those judges who, in directing the jury, merely read over their notes and let them guess at the opinions they have formed:—leaving them without any help or recommendation in forming their own judgments. Upon each case that came before him he had an opinion; and while he left the decision to the jury, he intimated how he thought himself. This manner of performing the office of judge is now generally followed and most commonly approved. It was the course taken by this great judge in trying Lord Cochrane and his alleged associates; but if any of those who attacked him for it, had been present at the trial of the case which stood immediately before it or after it in the paper, he would have found Lord Ellenborough trying that case in the self-same way—it being an action upon a bill of exchange or for goods sold and delivered.

Of the government under which Lord Ellenborough made his entry into political life, Lord Liverpool was one of the most distinguished, useful, and respectable members. But before proceeding to record his merits and his defects, after having so long dwelt upon great English lawyers, we shall naturally enough be asked, if the ancient kingdom of Scotland has produced no lights of the law in later times—no worthy successors of the Stairs, the Hopes, the Dirletons, the Mackenzies, the Erskines of former times—that we must

resort to the sister kingdom for our examples of judicial or of forensic renown? This warns us to do justice by our own countrymen—to look at home—and at least to make a small selection from, and pourtray one or two favourable specimens of native, before continuing our sketches of foreign talent. Let it not be thought, that in only sketching Erskine and Blair, the list of distinguished Scottish lawyers is limited to these two. No one who knows any thing of Lord President Campbell, of Lords Kames, Hailes, Monboddo, Braxfield, and Eldin, or of William Tait, and Mr. Mathew Ross, can entertain any doubt that the bench and the bar of those times were adorned by many men of vigorous and varied ability, profound learning, extensive capacity, and penetrating acuteness. But other reasons than the want of subjects, oblige us to limit ourselves to two whose very different characters and talents present some favourable points for contrasted delineation.

Exaggeration is ever hurtful to its object. It is foolish, then, to pretend that there was any equality between the two celebrated brothers who, for so many years, filled the first stations at the Scottish and the English bar. But, as their talents were so different, that it is more easy to say in what they differed than where they were alike, so a just comparison can hardly be said to place one over or under the other, any more than if their pursuits had been wholly diverse. Henry Erskine had nothing whatever of the genius which marked his illustrious brother; it might not, indeed, be incorrect to say, that he was not a man of genius at all. But he was a man of splendid talents. The finest wit would have been his, had it only been trained in a more refined school, and exercised in a larger sphere, instead of being confined to a provincial one. Of a most ready as well as retentive memory: of a miraculous quickness of apprehension, if not always as sure as rapid; of perfect judgment and discretion, above all, in the management of causes, in the absolute prudence of conducting which he resembled—and in that almost alone resembled—his celebrated relation; of learning, such as our Scotch learning is, quite enough to meet the ordinary demands of practice, though never making

pretensions to the fame of a first-rate lawyer; of versatility much greater than his brother's, inasmuch as he could handle his subject in any way, and rather preferred the gay, the humorous, even the droll, to the serious and the pathetic; a great master of argument, greater than his brother, but diversifying it much less with the flowers of imagination, his fancy being confined to happy allusion or effective jest: this eminent person enjoyed, for many long years, the undivided supremacy of our bar: rose rapidly to the place of dean of faculty, bestowed by the elective voice of the profession; and became lord advocate at one step, when his political friends acceded to power, upon the overthrow of Lord North's administration and the consequent removal of Mr. Dundas.

As men will never allow any one to possess two qualities of an apparently incompatible kind, and, when they must make their election, find it easier to concede the faculty that pleases them best, it was the custom to say, "The dean is witty, not a reasoner;"—"he can joke, but is no great orator." He was witty, but he was a close and a logical reasoner; he could joke, no man better, but he was an orator of a very high order. Full of life and vigour; actively searching and penetrating through his whole subject; ever keeping the cause in view, and never deviating from what could best serve its interests; abounding in happy illustrations from apt cases, strong analogies, striking comparisons; a very great master of the passions, when, which but rarely happened, he had occasion to work by them, or to play upon them—rarely, because in those days jury trial was confined to criminal cases; at all times a most subtle, close, and powerful arguer, with a force of language in which he resembled his brother, and far, very far, surpassed all his brethren of the Scottish bar—it is in vain to deny him a very high place among reasoners and among orators, merely because he had no talent for declamation, and had the good sense never once in his whole life to attempt it. But who ever heard his brother declaim, as far as energy of voice is concerned? and yet, who denies him a place amongst the greatest

orators of the day when the only doubt amongst orators is, whether or not he was the first of them all? It is, true, however, that Henry Erskine, beside the want of a declaiming voice, was without the topics of which declamation is composed. So it is, if possible, yet more *absurd and senseless to withhold* from him his just place among reasoners and orators of a graver kind, merely because somewhat excited by his exuberant fancy, still more by the inferior taste of the audience whom he addressed, or of the provincial society in which he mixed, he, far more than was becoming, or expedient, or accorded with correct taste, indulged in jests, and particularly in a kind of merriment well enough suited to society, but impossible even to be attempted in the courts or the senate of our southern neighbours—the relating of merry tales, more or less applicable to the subject in hand. It is quite certain, that much of his wit was, like Mr. Fox's, closely connected with the argument, and bore upon it, and helped it onward. It is equally certain, that although none of it had touched the arguments, this surplusage, intended for mere amusement and relaxation, did in no wise prevent the rest of his discourse from being considered, as it was, a piece of close reasoning or happy illustration. Partly spoiled by the habits of society, partly by the indifferent taste of the court in which he practised, partly, too, seduced by his excellent and social nature to gratify those whom he saw delighted to hang upon his lips, and wishing every deviation from severe taste augmented and prolonged tenfold, he certainly did lower the standard of his oratory to suit inferior natures; and, though an universal favourite, failed to attain the celebrity of a first-rate orator, even among his own admiring countrymen.

As Henry Erskine did not come into parliament until very late in life, it would be unfair to make any comments upon his political exhibitions. He did not, certainly, there much distinguish himself, less, indeed, even than his brother. In the debates of our general assembly of the church he loved to bear a part; but the nature of the subjects there discussed was rarely such as to excite or to reward the exertion of great debating

powers. Nevertheless, a most acute and sagacious judge of talents,* and one as severe as discerning, affirmed that he never heard him speak and miss any of the points of the question : and that when he had handled any subject, though he might have said a good deal that could well have been spared, he had left nothing to any one who followed him in any view of the subject.

On the whole, it may safely be affirmed, that this eminent person wanted only a metropolitan theatre early in life, to rank him amongst the first orators of his time. But there wanted no such change in his position to make him a more delightful member of society, for that change was quite impossible. He was in all respects one of the charms whose social converse were unbounded. Of a demeanour that every instant showed his noble birth ; in manners, of perfect ease, polish, and grace ; of a temper the most sweet, and of spirits the most joyous and gay, without ever being turbulent, boisterous, or obtrusive ; of conversation the most various, never refusing a serious turn, though delighting in every species of mirth, from refined comedy to broad farce—he was the life and soul of every circle with which he mixed. Affable to those below him ; full of firmness and independence to his superiors ; altogether without a particle of envy, or jealousy, or gall in his whole composition—no wonder that he was the darling of the age and the country in which he lived ; and was most happily and most justly described by one who knew him well, as “ the best beloved man in all Scotland.† It is truly painful to think, that the violence of political animosity should ever have interfered to darken the career of such a man. But the French revolution had created almost a madness of party on opposite sides of the controversy which it engendered ; and as those dismal times are past, far be it from us, by any word of ours, to revive their sad recollection.

The other great lawyer whom we have named, as

* The late Rev. Sir Henry Moncreiff.

† The late Lord Kinnaird in the House of Commons, himself amongst the most quick and delightful, as well as honourable of men.

cotemporary with Henry Erskine, eminent as he was, offers incomparably fewer points of description, because his endowments, however remarkable, were far less various. Mr. Blair, so long solicitor-general, and afterwards, during three years, lord president of the court of session, had a mind singularly framed for the successful study and practice of the law, to which he devoted all his days; and, as far as an indolent nature would permit, all his faculties. His indolence, however, was rather the *vis inertiae* that often attends genius, than the ordinary listlessness or aversion to labour that marks little minds. For he had been a steady and diligent student; had mastered all the principles of our jurisprudence in a manner little known among our professional men; and never failed to show whatever powers of application were required by any amount of business that could devolve upon the advocate most trusted and and most followed by clients. His talents were peculiarly fitted for legal pursuits. His understanding was bold and masculine; his sagacity penetrating; his reflections profound. With much less quickness of perception than many others—without any of the subtilty that distinguished such men as Matthew Ross—with little of that quick and piercing acuteness for which William Tait was famous—with no fancy in discerning topics, and hardly any nimbleness in meeting or escaping objections—he yet brought to bear upon each subject a plain and homely vigour, to which all ordinary difficulties yielded, and before which almost all antagonists gave way. He thoroughly comprehended every portion of his subject, and he impressed his hearers with the intimate belief, that he both understood it and could master it. Despising the vulgar arts of ordinary advocates, he unfolded it to all as he saw it himself; and he commented upon it with such force, so plainly yet so strongly, so earnestly yet with so much gravity and sustained dignity both of thought and of expression, that it rather seemed as if a Daniel had come to judge, than an advocate to address his judges. Accordingly his sway over the bench was supreme; and there are many now alive who may recollect, that when the court found

themselves, compelled to decide against him, they faltered, paused, would fain have avoided the hard necessity,—seemed distrustful of their own opinion, and all but apologized for taking so extraordinary a liberty with such a great legal authority.

Of external qualities he had none, or next to none, that were calculated to deepen or even to sustain the impression which his matter was fitted to make. His diction, though quite correct and plain, was somewhat meager and jejune: his ideas were constantly more and greater than he had the means of expressing; often matter apparently good, struggled for birth, and was denied access to the mind of the hearer; much hesitation obstructed the flow of the discourse; and though the personal presence was fine, and the countenance expressive, the voice was guttural and harsh. When he ascended the bench, his talents for despatching business were thought by some to have been rather over-rated; but his high and dignified demeanour commanded universal respect, whilst his judgments were marked by that great learning and ample capacity for which he had so long been famed.

We have been turned aside from our sketch of those with whom Lord Ellenborough came into political life, by the wish to render Scotland justice, and to show that she can boast of great men among the luminaries of her ancient republican bar. We now resume the thread where it was broken off, and recall to the recollection of our readers a distinguished person, who presided over the councils of this country for a longer period than any other minister, excepting Walpole and Pitt; and for a period incomparably more glorious, in all that is commonly deemed to constitute national renown.

Lord Liverpool was prime minister of England for fifteen years, after having filled in succession almost every political office, from under-secretary of state upwards; and passed his whole life, from the age of manhood, in the public service, save the single year that followed the death of Mr. Pitt. So long and so little interrupted a course of official prosperity was never, perhaps, enjoyed by any other statesman. But this was

not his only felicity. It happened to him, that the years during which the helm of the state, as it is called, was entrusted to his hands, were those of the greatest events, alike in negotiation, in war, in commerce, and in finance, which ever happened to illustrate or to checker the annals of Europe. He saw the power of France attain a pitch altogether unexampled, and embrace the whole of the continent, except Russia alone, hitherto believed safe in her distant position and enormous natural strength; but he saw her too invaded, her numerous armies overthrown, her almost inaccessible capital destroyed. Then followed the insurrection of conquered Germany—the defeat of victorious France—the war pushed to her territory—the advance of the allies to the capital—the restoration of the ancient dynasty. By a singular coincidence, having signalized his outset in political life by a supposition which he propounded as possible—a march to Paris—this was then deemed so outrageous an absurdity that it became connected with his name as a standing topic of ridicule; yet he lived to see the impossibility realized, was prime minister when the event happened, and did not survive the dynasty which he had mainly contributed to restore. Peace was thus brought back, but without her sister plenty; and intestine discord now took the place of foreign war. He saw the greatest distress which this country had ever suffered in all the departments of her vast and various industry; agriculture sunk down, manufactures depressed to the earth, commerce struggling for existence, an entire stop put to all schemes for lightening the load of the public debt, and a convulsion in the value of all property, in the relations of all creditors and all debtors, in the operation of all contracts between man and man—the inevitable effects of a sudden and violent alteration of the currency, of which his colleagues, twenty years before, had interfered to change the standard. Gradually he saw trade, and agriculture, and industry, in all its branches, again revive, but public discontent not subsiding; both in Ireland, which he mainly helped to misgovern, and in

England, where he opposed all political improvement, he witnessed the tremendous effects of a people becoming more enlightened than their rulers, and the last years of his life were spent in vain efforts to escape from a sight of the torrent which he could not stem. It made an interlude in this long and varied political scene, that he consented to the worst act ever done by any English monarch, the persecution of his queen for acts of hers and for purposes of his own, connected with a course of maltreatment to which the history of conjugal misdemeanor furnishes no parallel. Yet, prodigious as is the importance, and singular as the variety of these events, which all happened during his administration,—and although party ran higher and took a far more personal turn during those fifteen years than at any other period of our political history,—no minister, nay, few men in any subordinate public station, ever passed his time with so little ill-will directed towards himself, had so much forbearance shown him upon all occasions, nay, engaged uniformly so large a share of personal esteem. To what did he owe this rare felicity of his lot? How came it to pass that a station, in all other men's cases the most irksome, in his was easy—that the couch, so thorny to others, was to him of down? Whence the singular spectacle of the prime minister—the person primarily answerable for any thing which is done amiss, and in fact often made to answer for whatever turns out unluckily through no possible fault of his own, or, indeed, of any man—should, by common consent, have been exempted from almost all blame; and that whoever attacked most bitterly all other public functionaries, in any department, should have felt it no business of his to speak otherwise than respectfully, if not tenderly, or if not respectfully, yet with mild forbearance of him, who, having been all his life in high office, a party to every unpopular and unfortunate proceeding of the government, and never a changeling in any one of his political opinions, even in the most unpopular of all, was now for so many long years at the head of the national

councils, and in the first instance, by the law of the constitution and in point of fact answerable for whatever was done or whatever was neglected?

This question may perhaps be answered by observing, that the abilities of Lord Liverpool were far more solid than shining; and that men are apt to be jealous, perhaps envious, certainly distrustful, of great and brilliant genius in statesmen. Respectable mediocrity offends nobody. Nay, as the great bulk of mankind feel it to be their own case, they perhaps have some satisfaction in being correctly represented by those who manage their affairs. Add to this, that the subject of these remarks was gifted with extraordinary prudence;—displaying from his earliest years a rare discretion in all the parts of his conduct. Not only was there nothing of imagination, or extravagance, or any matter above the most ordinary comprehension in whatever he spoke (excepting only his unhappy flight about marching to Paris, and which for many years seemingly sunk him in the public estimation)—but he spoke so seldom as to show that he never did so unless the necessity of the case required it; while his life was spent in the business of office, a thing eminently agreeable to the taste, because closely resembling the habits, of a nation composed of men of business. “That’s a good young man, who is always at his desk,” the common amount of civic panegyric to a virtuous apprentice, was in terms, no doubt, often applied to Mr. Robert Jenkinson. “Here comes a worthy minister whose days and nights have been passed in his office, and not in idle talking,” might be the right transformation by which this early eulogy was adapted to his subsequent manhood and full-blown character. Nor must it be forgotten that a more inoffensive speaker has seldom appeared in parliament. He was never known to utter a word at which any one could take exception. He was besides (a much higher praise) the most fair and candid of all debaters. No advantage to be derived from a misrepresentation, or even an omission, ever tempted him to forego the honest and the manly satisfaction of stating the fact as it was; treating his adversary as he deserved; and at least

reciting fairly what had been urged against him, if he could not successfully answer it. In these respects, Mr. Canning furnished a contrast which was eminently beneficial to Lord Liverpool, with whom he was so often, absurdly enough, compared; for no better reason than that they were of the same standing, and began life together, and in the same service. But, in another respect, he gave less offence than his brilliant contemporary. A wit, though he amuses for the moment, unavoidably gives frequent offence to grave and serious men, who don't think public affairs should be lightly handled, and are constantly falling into the error that, when a person is arguing the most conclusively, by showing the gross and ludicrous absurdity of his adversary's reasoning, he is jesting and not arguing; while the argument is in reality more close and stringent, the more he shows the opposite picture to be grossly ludicrous,—that is, the more effective the wit becomes. But though all this is perfectly true, it is equally certain that danger attends such courses with the common run of plain men. Hence all lawyers versed in the practice of *Nisi Prius*, are well aware of the risk they run by being witty, or ingenious and fanciful before a jury; unless their object be to reduce the damages in an absurd case, by what is called laughing it out of court; and you can almost tell, at a great distance, whether the plaintiff or the defendant's counsel is speaking to the jury, by observing whether he is grave, solemn, and earnest in his demeanour, or light and facetious. Nor is it only by wit that genius offends; flowers of imagination, flights of oratory, great passages, are more admired by the critic than relished by the worthy baronets who darken the porch of Boodle's,—chiefly answering to the names of Sir Robert and Sir John; and the solid traders,—the very good men who stream along the strand from 'change towards St. Stephen's Chapel, at five o'clock to see the business of the country done by, the sovereign's servants. A pretty long course of observation on these component parts of parliamentary audience, begets some doubt if noble passages (termed “fine flourishes”) be not taken by them as something personally offensive.

Of course, we speak not of quotations—these no doubt, and reasonably, are so considered,—especially if in the unknown tongues; though even an English quotation is not by any means safe, and certainly requires an apology. But we refer to such fine passages as Mr. Canning often indulged himself, and a few of his hearers with; and which certainly seemed to be received as an insult by whole benches of men accustomed to distribute justice at sessions—the classes of the

—*Pannosus vacuis ædilis Ulubris.*

—him whom Johnson called (translating)

The wisest justice on the banks of Trent.

These worthies, the dignitaries of the empire, resent such flights as liberties taken with them; and always say, when others force them to praise—"Well, well—but it was out of place. We have nothing to do with King Priam here—or with a heathen god, such as *Æolus*; those kind of folk are very well in Pope's Homer and Dryden's Virgil;—but as I said to Sir Robert, who sat next me, what have you or I to do with them matters? I like a good, plain man of business, like young Mr. Jenkinson—a man of the pen and the desk, like his father before him—and who never speaks when he is not wanted:—let me tell you, Mr. Canning speaks too much, by half. Time is short—there are only twenty-four hours in the day, you know."

It may farther be observed, that, with the exception of the queen's case, there was no violent or profligate act of the government, nor any unfortunate or unpopular measure, which could not, with some colour of justice, be fixed upon some of Lord Liverpool's colleagues, in ease of himself, if men were thus favourably disposed. Lord Castlereagh was foreign minister, and had conducted our whole negotiations abroad in person. He was, therefore, alone held accountable for all the mistakes of that department; and especially for the countenance given to the designs of the holy allies. So, notwithstanding his known liberality upon Irish ques-

tions, and his equally certain opposition to the cruelties by which the history of the government during the rebellion of 1798 had been disfigured, he had committed the sin, never by Irishmen to be forgiven or forgotten,—the carrying through of the union; and abating the greatest public nuisance of modern times, the profligate, shameless, and corrupt Irish Parliament. Hence, all the faults and all the omissions of the ministry, in respect of Irish affairs, were laid upon his single head by every true Irishman; while Lord Liverpool, himself a party to the worst policy of past times, was, in his own person, as head of the government for so many years, the main obstacle to the repeal of the Penal Code; and yet he escaped all censure in the perspicacious and equitable distribution of Irish justice. For obstructing all law reform, and delay in the administration of justice in practice, Lord Eldon offered a convenient object of attack; and on him all the hostile fire was directed,—being thus drawn off from the favourite premier. Even the blunders committed in finance, though belonging to the peculiar department of the first lord of the treasury, were never marked in connexion with any name but Mr. Vansittart's: the boast of prosperity,—the schemes of bank discount which accompanied it, exacerbating the malady of speculations one year, and the misery of the panic the next,—were as much Lord Liverpool's as Mr. Robinson's; but the latter alone was blamed, and even named in reference to these great calamities. Nay, even the violent revolution suddenly effected in the currency, and effected without the least precaution to guard against the country repaying twenty-five shillings for every twenty shillings borrowed,—was reckoned exclusively the work of Mr. Peel, as if he, being out of office altogether, had been at the head of the government; while the whigs stepped in to claim their share of the public gratitude and applause for this great, but not very well-considered, operation.

It was curious to observe the care with which, all the while, these selections were made of parties on whom to lay the blame. No popular outcry ever assailed

Lord Liverpool. While others were the objects of alternate execration and scorn, he was generally respected, never assailed. The event that befell him was that which might have mortified others ; but well suited his tastes, to be little thought of, less talked about—or if, in debate, any measure was to be exposed—any minister to be attacked—means were ever found, nay, pains were taken, to “ assure the house that nothing was meant against the respected nobleman at the head of his majesty’s government, for whom we all entertain feelings of *et cetera*, and *et cetera* and of *et cetera*.”

Such was the happy lot of Lord Liverpool ; such are the comforts which a respectable mediocrity of talents, with its almost constant companion, an extreme measure of discretion in the use of them, confers upon its possessor in lieu of brilliant reputation, with its attendant detraction and hate. While the conqueror mounts his triumphal car, and hears the air rent with the shouts of his name, he hears, too, the malignant whisper appointed to remind him, that the trumpet of fame blunts not the tooth of calumny ; nay, he descends from his eminence when the splendid day is over, to be made the victim of never-ending envy, and of slander which is immortal, as the price of that day’s delirious enjoyment ; and all the time safety and peace is the lot of the humbler companion, who shared his labours without partaking of his renown, and who, if he has enjoyed little, has paid and suffered less.

Accordingly, it is fit that one thing should be added to what has been recorded of the general forbearance exercised towards this fortunate minister ; it was nearly akin to neglect or indifference, though certainly not at all savouring of contempt. There was nothing striking or shining in his qualities, which were the solid, useful, well-wearing ones of business-like habits and information. While great measures were executed, no one thought of Lord Liverpool. When men came to reflect, they found he was still prime minister ; but he retired so much from public view that he was seldom thought of. Thus, if he had no blame when faults were committed, or things wanting ; so he had no praise for what was

well done, or gratitude for many signal successes. He was, in truth, hardly ever considered in the matter.

He was a plain, every-day kind of speaker, who never rose above the range either of his audience or his topic; and chose his topic, so as to require no strength of persuasion beyond what he possessed. He was clear and distinct enough, without even, in that first essential of business speaking, being distinguished for his excellence above almost any one who is accustomed to state a case or take part in a debate. His diction was on a level with his matter; it had nothing rare, or adorned, or happy; but though plain enough, it was not pure, or more pure than the sources from which he derived it—the parliamentary debates, the official despatches, and the newspapers of the day. If adopting the middle style, or even the *humile genus dicendi*, he had maintained in his language the standard purity, he would have passed, and justly, for a considerable artist in that kind;—as Swift is always praised for being a model of one style of writing. But it would be very wide, indeed, of the truth to say that the three-fold nature of Mr. Jenkinson, Lord Hawkesbury, and Lord Liverpool, ever presented a model of any thing;—except perhaps safe mediocrity; of a pure or correct style, he assuredly was no sample. He “met the question”—when “on his legs” he would take upon himself, “to assert, as he had caught the speaker’s eye,” that no “influential person” of “his majesty’s actual government,” had ever “advocated liberalism,” less than, “the humble individual who now addressed them,” and whose duty it was “to justify the proposed bill.” In short, he showed plainly enough, that a man might avoid lofty flights, and stick to his native earth, without habitually walking in clean places; and that he who is not bold enough to face the perils of the deep, may hug the shore too near, and make shipwreck upon its inequalities.

In council, he was safe if not fertile of expedient. He seldom roused his courage up to bold measures and was one of the narrow minds whom Lord Wellesley quitted, when he found them resolved neither to

make peace or to wage war with any reasonable chance of success; and whom the prodigious attainments of his illustrious brother, contrary to all probability, and beyond every rational hope, united, with the madness of Napoleon, and the severity of a northern winter, to rescue from the position which their puny councils had so well earned, and so richly deserved. He had not the spirit or the political courage required for great emergencies; yet could he be driven, by the fear of losing office, to patronize the most disgraceful attempt ever made in this country by royal caprice; and thus encountered the imminent peril of civil war. This is, indeed, the darkest spot in his history; and another is connected with it; he lost his head entirely when the people had defeated a body of the troops at the queen's funeral; and is understood to have given orders for resorting to extremities—orders to which the cooler courage of the military commanders happily postponed their obedience.

The candour which he ever displayed in debate has been already marked. It was a part of the natural honesty of his character, which power had not corrupted, and no eagerness of parliamentary warfare could interrupt. His general worth as a man, was always acknowledged; and this added very justly to the prevailing good opinion which he enjoyed among his countrymen, almost without distinction of party. It may be gathered from our former observations that we regard this opinion to have been somewhat overdone; and that justice did not at all sanction the distribution of praise and of blame, which the country made between him and his colleagues.

As it is difficult to find a more correct representation of the Addington ministry, than the noble person of whom we have just been speaking; so the popularity of that government was, like his, very much owing to the moderation of both its talents and its principles. After the somewhat violent and overbearing, as well as war-like and arbitrary administration of Mr. Pitt, they who both made peace with France, composed the internal dissensions of the country, and its free constitution, pre-

sented at the same time to its confidence only second-rate genius, in every department save two;—a genius diluted and lowered to the moderate standard which suit the public taste. These two exceptions were the law and the navy. Of Lord Eldon we have already spoken; the present sketches would be imperfect if Lord St. Vincent were passed over in silence; for he was almost as distinguished among the statesmen as the warriors of his age.

This great captain, indeed, presented a union as rare as it was admirable, of the brightest qualities which can adorn both civil and military life. He early distinguished himself in the naval profession; and was associated with Wolfe in those operations against Quebec, which crowned our arms with imperishable glory, and loaded our policy with a burden not yet shaken off; though, as Lord St. Vincent early foresaw, becoming every day more difficult to bear. An action which he soon after fought with the *Foudroyant* line of battle ship, was the most extraordinary display of both valor and skill witnessed in that war, so fertile in great exploits; and it raised at once his renown to the highest pitch. The peace then came; and it was succeeded by a war, the only one in which the fleets of England reaped no laurels; until just before its close the bravery and seamanship of Rodney retrieved our naval honour. For near twenty years Sir John Jervis was thus unemployed; and in part this neglect must certainly be ascribed to the side in politics which he took,—being a whig of Lord Shelburne's school,—highly prized and unreservedly trusted by that able, sagacious, and consistent statesman; than whom none ever entered into the combats of public life with an ampler provision of combined capacity and information, and none ever sustained the useful part which he acted, with more unsullied honour. This tribute of truth and justice, is due from whigs to one whom it suited the policy of 1783 to run down by every species of slander,—partly in the prose of pamphlets, partly in the verse of pasquinades, partly in the mixed fiction and prose of speeches,—merely because, not belonging to the party, he was audacious enough to

act for himself, instead of making himself a tool of those who boasted that they never had confided in him, at the moment they were complaining of his deserting their councils.

While Sir John Jervis remained, during this long and eventful period, on shore, and unemployed in any branch of the public service, he accomplished himself by constant reading, by much reflection, by the intercourse in which he ever delighted with men of learning and talents, as a statesman of profound views, and of penetration hardly equalled by any other man of his time. His natural acuteness no obstacle could impede; his shrewdness was never to be lulled asleep; his sagacity no man ever found at fault; while his provident anticipations of future events seemed often beyond the reach of human penetration. We shall give a remarkable example of this in a matter of deep interest at the present moment.

When Lord Shelburne's peace, (1783,) was signed, and before the terms were made public, he sent for the admiral, and showing them, asked his opinion. "I like them very well," said he, "but there is a great omission." "In what?" "In leaving Canada as a British province." "How could we possibly give it up?" inquired Lord Shelburne. "How can you hope to keep it?" replied the veteran warrior. "With an English republic just established in the sight of Canada, and with a population of a handful of English settled among a body of hereditary Frenchmen. It is impossible; and rely on it, you only retain a running sore, the source of endless disquiet and expense." "Would the country bear it? Have you forgotten Wolfe and Quebec?" asked his lordship. "Forgotten Wolfe and Quebec? No; it is because I remember both. I served with Wolfe at Quebec; having lived so long, I have had full time for reflection on this matter; and my clear opinion is, that if this fair occasion for giving up Canada is neglected, nothing but difficulty, in either keeping or resigning it, will ever after be known." We give the substance of this remarkable conversation as we have it, from more sources of information than one; and the recollection of the parties is confirmed by the tone of

the earl's letters in 1813, which we have seen. There was then no question of a surrender: but he plainly shows the greatest distrust of our being suffered to retain the colony.

When the war broke out in 1793, Admiral Jervis was soon employed on the Mediterranean and Lisbon stations. What wonders he effected with an inadequate force is well known to the profession. All the world is aware of his glorious victory over the Spanish fleet in February, 1797, when he defeated an enemy of nearly three times his force. Nor is there any one who has not heard of the steady determination of purpose, so characteristic of the man, by which his fleet was made ready to sail from the Tagus in as many hours as all but himself said days would be required for the preparation; after overland advices had arrived at Lisbon of the enemy having put to sea. But the consummate vigour and wisdom of his proceedings during the dreadful period of the mutiny, are no less a theme of wonder and of praise. It was the practice to despatch mutinous vessels to serve under his orders, and he soon, by his masterly operations of combined mercy and justice, reduced them to order, restoring discipline by such examples as should be most striking, without being more numerous than absolute necessity required. The humane ingenuity of his contrivance, to make one execution produce the effect of many, by ordering it on an unusual day, (Sunday morning,) as is well known. His prompt measures of needful, and no more than the needful severity, were as effectual to quell a formidable mutiny which broke out in the fleet, that had just returned from foreign service, and was suddenly ordered to the West Indies to watch the French expedition there. The revolt was at once subdued; the fleet set sail, and there never again was heard the whisper of discontent respecting the painful disappointment to which the men were thus subjected.

When the Addington ministry was formed, he was placed at the head of the admiralty; and now shone forth, in all its lustre, that great capacity for affairs with which he was endued by nature, and, which ample ex-

perience of men, habits of command, and an extended life of deep reflection had matured. He laid the foundation of a system of economical administration which has since been extended from the navy to all the departments of the state. But it was bottomed on a searching scrutiny into the abuses of the existing system. The celebrated "Commission of Naval Inquiry" was his own work, and it both led to numberless discoveries of abuse and extravagance, and gave the example to all the similar inquiries which soon after followed. It did more: it introduced the whole subject of economical reform, and made it become, both in and out of parliament, the principal object, for many years, of all our patriotic statesmen—an object which alone they carried through in spite of those ministerial majorities, omnipotent upon every other controversy among the parties in parliament. It is impossible to calculate what would have been the saving effected to the revenues of this country had Lord St. Vincent presided over any great department of national affairs from the beginning of the war, instead of coming to our assistance after its close. But in proportion to his services in this line of reformation, was the clamour which his operations excited against him. His unsparing rigour, his inflexible justice, his fixed determination to expose delinquents, how high soever—to dispense with useless services, how many hands soever might be flung out of the superfluous and costly employment—raised against this great and honest statesman a host of enemies, numerous in exact proportion to the magnitude of the objects he had in view, and exasperated in proportion to the unjust gains of which he was depriving them: in other words, the hostility to which he was exposed was in an exact proportion to his merits. Nor did the gratitude of the country, whom his courage and disinterestedness was thus serving so essentially, at all keep pace with the great benefits which he bestowed. The spirit of party interposed with its baleful influence; and when the Pitt and Fox parties combined to forget their animosities, for the purpose of unseating Mr. Addington, the ground chosen by the new allies upon which to celebrate their

union, and to commence their joint operations, was an attack upon the naval administration of the only great man whom the ministers could boast of having among their number—the illustrious warrior who, after defeating the enemies of his country by his arms, had waged a yet more successful war against her internal foes by his vigour as a reformer, his irreconcilable enmity to all abuses, and his resistless energy in putting them down.

It is hardly necessary to add, that of eloquence, or debating power, Lord St. Vincent had nothing whatever; nor to such accomplishments did he lay any claim. Indeed, he held the arts of rhetoric in supreme contempt; always contenting himself with delivering his own opinion, when required, in the plainest language—and often expressing what he felt in sufficiently unceremonious terms. Not that he had any thing at all of the roughness often found in the members of the naval profession. On the contrary, his manners were those of a highly polished gentleman; and no man had more of the finished courtier in all his outward appearance and demeanour. His extreme courtesy, his admirable address in managing men, the delicacy with which he could convey his pleasure to inferiors, or his dissent to equals, or his remonstrance to superiors, being the external covering of as firm a determination as ever guided a human being, were truly remarkable; and gained for him, with persons of superficial observation, or imperfectly acquainted with his character, the reputation of being cunning and insincere; when, in truth, it only arose from a good-natured desire of giving as little needless uncasiness as possible, and raising as few difficulties as he could upon matters foreign to his main purpose. When he went to the Tagus, at the head of the expedition and the commission, in 1806, the object being, in case Portugal proved indefensible against the threatened French invasion, to make the royal family and principal nobility transfer the seat of government to the Brazils, the proceedings of this chief, in his two-fold capacity of captain and statesman, were justly remarked for the great talents and address which they exhibited. He began by

cutting off all communication between his fleet and the land; this he effected by proclaiming an eight day's quarantine. His colleagues in the commission having joined him, he still prevented his officers and men from landing; but threw open all his ships to the natives of the place, whose multitudes never ceased pouring through those gallant vessels, lost in admiration of their beauty, their resistless force, and the discipline of the crews. With the court his intercourse now began; and the terror of his name, even without his armament, would there have made him supreme. The reluctance to remove was, of course, universal and deep-rooted; nor could any arrangement the expected conqueror might offer prove less palatable, than expatriation and banishment for life across the Atlantic, to pampered voluptuaries; the extent of whose excursions had hitherto been the distance between the town and country palaces. But he had arranged every thing for their voyage, and he was quite ready to compel their embarkation. His plan would have exposed his own person to some danger; but would have required no application of military force, if nothing was attempted against the fleet. It seemed to have been borrowed from the celebrated seizure, by Cortez, of the Emperor Montezuma's person, in his capital of Mezico; and the very few to whom he communicated it, while struck with the boldness of the design, saw that it was as happy as it was bold, and had no doubt whatever of its perfect success.

Although we have noticed his contempt for the artifices of oratory, it is remarkable that some of his most intimate friends were those who chiefly owed their renown to its practice. Among these was Lord Erskine; and he enjoyed the friendship of Mr. Fox and Lord Grey. But he made a great difference between the eloquence of the senate and the bar—a difference not perhaps marked by his accustomed sagacity and liberal views, yet sufficiently easy to account for. Parliamentary speaking he regarded as mere “talk.” He saw the noblest exertions of the orator, and also the speeches of longest duration (a circumstance much fitted to rouse his impatience) end, as he phrased it, in wind. The

decision came, which he reckoned the result of the battle, and he could trace no connexion between that and the preceding debate. Hence he deemed the whole "nonsense," a "farce," a "child's play;" without reflecting that, in the long-run, discussion produces, directly or indirectly, its effect; as he probably would have done had he viewed the scene from what he would call "a safe distance;" that is, so far off as not to have his early hours interfered with, and his patience assailed by length of speech. The trial of causes he viewed with other eyes. That he considered as business—as acting and not talking; and, having the highest admiration for the skill of an advocate, there was no society in which he delighted so much as in that of the bar. To hear his acute and even profound remarks upon the conduct of a cause—and the play of adverse counsel, every point of which, to the most minute and technical, he clearly comprehended and highly relished—was one of the things that impressed the listener with the greatest opinion of his extraordinary capacity. He viewed it as a fine operation of attack and defence; and he often said, that there was nothing which he ever more regretted than not having been able to attend the proceedings in the queen's case.

In recounting the triumphs of his military genius, we have not adverted to the extraordinary promptitude, and powers of combination which he displayed, when he equipped the finest expedition that ever was detached from a fleet, and sent it under Nelson up the Mediterranean. That illustrious hero always acknowledged, with the most affectionate gratitude, how much his victory of the Nile was owing to this grand operation of his chief, for whom he felt and ever testified the most profound veneration. Nor was any thing ever more disgusting to his truly noble and generous nature, than the attempts of that tribe, the worst kind of enemies, (*pessimum inimicorum genus, laudatores*,)—the mean parasites who would pay their court to himself by overrating his services at St. Vincent in 1797, and ascribing to him the glory of that memorable day. Their affection became

thus grounded upon thorough knowledge of each other's merits, and the admiration which these commanded was mutual; nor did the survivor once omit an opportunity of testifying the love he bore his illustrious friend, and his grief for the blow which took him from his country. On board his flag-ship, on all those great occasions when he entertained his numerous followers, Nelson's *Dirge* was solemnly performed while they yet surrounded the table; and it was not difficult to perceive that the great warrior's usual contempt for displays of feeling here forsook him, and yielded to the impulse of nature and of friendship.

So little effect on exalted spirits have the grovelling arts of little souls! He knew all the while, how attempts had been made by Lord Nelson's flatterers to set him up as the true hero of the fourteenth of February; but never for an instant did the feelings towards Nelson cross his mind, by which inferior natures would have been swayed. In spite of all these invidious arts, he magnanimously sent him to Aboukir; and, by unparalleled exertions which Jervis alone could make, armed him with the means of eclipsing his own fame. The mind of the historian, weary with recounting the deeds of human baseness, and mortified with contemplating the frailty of illustrious men, gathers a soothing refreshment from such scenes as these; where kindred genius, exciting only mutual admiration and honest rivalry, gives birth to no feeling of jealousy or envy, and the character which stamps real greatness is found in the genuine value of the man, as well as in the outward splendour of the deed; the highest talents sustained by the purest virtue; the capacity of the statesman, and the valour of the hero, outshone by the magnanimous heart, which beats only to the measures of generosity and of justice.

Nor let it be deemed any abatement of this praise if the undeniable truth be stated, that no two men in the same professional career, and both of consummate excellence, ever offered more points of marked diversity in all the particulars which distinguish character and signalize the kinds of human genius. Alike in courage,

except that the valour of the one was more buoyant, more constitutional—of the other, more the steady result of reflection, and the produce of many great qualities combined, that the mere mode of temperament;—alike without any difference whatever in that far higher quality, moral courage, and political, which is the highest pitch of it; alike in perfect nautical skill, the result of talents matured by ample experience, and of the sound judgment which never disdains the most trifling details, but holds nothing trivial connected with an important subject:—yet, even in their professional abilities, these great captains differed: for the more stern mind of the one made him a severe disciplinarian, while the amiable nature of the other seduced him into an habitual relaxation of rules whose rigorous enforcement wounded, or at least galled his kindlier feelings. Not that either Jervis stooped to the fopperies by which some little minds render the service intrusted to their hands as ridiculous as themselves; or that Nelson failed to exact strict compliance with rules, wherever their infraction would be manifestly hurtful; but the habits of the two men upon ordinary occasions were opposite, and might be plainly seen by an inspection of the ships that bore their flags. So, too, Nelson was less equal to the far-seeing preparation, and unshaken steadfastness of purpose required to sustain a long-continued operation; and would, therefore, ill have borne the monotony of a blockade, such as that which kept Collingwood for years on shipboard, or that which Jervis maintained off Brest with the channel fleet. It is also undeniable, that, although nothing could exceed the beauty and perfect fitness of his dispositions for action when the whole operations were reduced to their ultimate point, yet he could not, like Jervis, have formed the plan of a naval campaign; or combined all the operations over a large range of coast and sea, making each part support the other, while all conducted to the main purpose. Thus, too, it may be doubted if St. Vincent would have displayed that sudden, almost intuitive promptitude of decision, the result more of an ardent soul than a penetrating sagacity, which led Nelson to his marvellous course

from the old world to the new in 1805; when he in an instant discovered that the French fleet had sailed to the West Indies, and having crossed the Atlantic in chase of them, again discovered that they had returned; and appeared in Europe almost as soon as the enemy arrived, whom the mere terror of his tremendous name had driven before him from hemisphere to hemisphere. That the movements of his illustrious master would have been as rapid, and his decision as prompt, had the conjecture impressed itself on his mind with the same force, none can doubt; and it may be farther admitted, that such a peremptory will as the latter showed, such a fixed resolution to be obeyed,—such an obdurate, inflexible, unteachable ignorance of the word “impossible,” when any preparation was to be made,—formed no part of Nelson’s character; although he showed his master’s profound and crass ignorance of that word—the mother tongue of little souls—when any mighty feat was to be done, such as souls like these cannot rise to comprehend. He who fought the great fight with the *Foudroyant*, would have engaged his Spanish first-rates, and his flag off St. Vincent’s floated like Nelson’s over a seventy-four; but Nelson could not have put to sea in time for intercepting the Spanish fleet; any more than he could have cured or quelled the mutinous contagion which infected and distracted Jervis’s crews on the eve of the action.

If, even in a military view, these great warriors thus differed, in all other respects they are rather to be contrasted than compared. While it was hard to tell whether Jervis excelled most in or out of his profession, Nelson was nothing on shore—nay, had weaknesses, which made the sea as necessary, if not to his mental condition, at least to his renown, as it is to the bodily health of some invalids. The great mind of the one was the natural ally of pride; the simpler nature of the other became an easy prey to vanity. The latter felt so acutely the delight of being loved and admired by all—for to all he was kind himself,—that he could not either indulge in it with moderation, or conceal it from others. Severely great, retiring within himself, occupied

with his own reflections, the former disregarded the opinion of those whom he felt destined to command; and only descended to gain men's favour that he might avail himself of their co-operation, which he swiftly converted into service. While Nelson thought aloud, Jervis's words were little apt to betray the feelings that ruled, or the meditations that occupied his mind. The one was great only in action; the other combined in a rare, perhaps an unexampled manner, all the noble qualities which make counsel vigorous and comprehensive, with those which render execution prompt and sure. In the different temper of the men's minds, you could easily tell that the one would be generally popular, from the devotion which the multitude always pay to brilliant valour, and the affection which a gentle, kind, and innocent nature is calculated to win; while the other, with courage as undaunted, though eclipsed by greater and rarer qualities, stood too far removed from the weaknesses of ordinary men to appear in such an amiable light; and by the extent of his capacity and his habits of command, secured the respectful submission of others more than he won their love. Yet, while of Nelson it was justly said that no serious breach of discipline was ever overlooked by him; of Jervis it was as truly observed, that all good officers—all men employed under him, whether in the civil or military service—spoke of him as they felt, with admiration of his genius, approaching to enthusiasm; although the followers of his illustrious friend adored their idol with yet more fervent devotion. In his political opinions, this great commander was liberal and free, ever preferring the humane and enlightened side; and though loyally attached to the constitution of his country, yet careless what offence he might give to existing rulers by the unrestrained openness of his sentiments upon public affairs. Accordingly, he was even less a favourite with George III. and his court, than his great master, whose party was always opposed to that narrow-minded and bigoted prince.

It is truly painful to fling in that shade, without which this comparative sketch would lose all likeness to its

original. The conduct of Lord St. Vincent was always high and decorous; and although he had a singular aversion to cant of any kind, nor to any more than that of an overdone and pharisaical morality, he never lowered, in his own person, the standard of private any more than of public virtue; wisely holding all conspicuous men as trustees for the character of the people, and in some sort representatives of the people's virtues. Lord Nelson, in an unhappy moment, suffered himself to fall into the snares laid for his honour by regal craft, and baited with fascinating female charms. But for this, he might have defied all the malice of his enemies, whether at sea or on shore, in the navy or at the court; because nothing is more true than that great merit is safe from all enemies save one—safe and secure, so its possessor will only not join its foes. Unhappily, he formed this inauspicious junction, and the alliance was fatal to his fame. Seduced by the profligate arts of one woman, and the perilous fascinations of another, he lent himself to a proceeding disfigured by the blackest colours of treachery and of murder. A temporary aberration of mind can explain though not excuse this dismal period of his history. The sacred interests of truth and of virtue forbid us to leave the veil over these afflicting scenes undrawn. But, having once lifted it up, on seeing that it lays bare the failings of Nelson, we may be suffered to let it drop over a picture far too sad to dwell upon, even for a moment!

GEORGE III. AND THE CATHOLIC QUESTION.*

[From the Edinburgh Review.]

THE editor of this little collection is Dr. Phillpotts; and by means of it, he has rendered, we think, a very signal service to the great cause of catholic Emancipation. Whatever may have been his intention, we cannot but feel that he has advanced that question far more by this publication, than he ever retarded it by his elaborate and zealous, not to say angry pamphlets against it. So that, whether he may have earned with his patrons of the protestant ascendancy, any new title to their favour, or relaxed their anxiety for his advancement in the church,—and whether he may increase or diminish his share of that bright reversion in the hierarchy, to which all good intolerants look forward when the present hateful reign of liberal opinions shall be at an end, and exclusion be restored to its full swing,—we at least, and all liberal men, are bound duly to acknowledge the obligation he has imposed upon us, by advancing our doctrines.

We presume that the most bigoted tory—the most devoted worshipper of kings, that is bred in courts, or

* Letters from his late majesty to the late Lord Kenyon, on the coronation-oath, with his lordship's answers; and letters of the Right Hon. William Pitt to his late majesty, with his majesty's answers, previous to the dissolution of the ministry, in 1801.

even in cathedrals—never dreamt of maintaining that the mere authority of a monarch, simply as such, should have more weight than that of another man, after, in the course of destiny, he has ceased to fill the throne. If it were possible to contend for such a position, it would of necessity follow, that the opinions, the bare *dicta* of all deceased monarchs must be of equal authority, and equally entitled to implicit and submissive acceptance by their subjects, and the descendants of their subjects, throughout all generations. Thus, the authority of Alfred, and of King John, of Richard III. and Edward I., of Queen Mary and Queen Elizabeth, nay, of good Queen Ann, the especial nursery mother of the church, would be exactly equal; and George III. would have no better title to challenge our respect for his sentiments after his decease, than an unprincipled driveller like Henry VI., a blood-thirsty ruffian like Richard III., or a crafty and despicable tyrant like John. Each of these princes, while alive, in office, and clothed with regal powers, is, no doubt, esteemed of equal authority by the right believers of the true tory breed; but after death, they must, in common sense, be regarded merely as human beings, and weighed in the scales of impartial justice. Their authority, therefore, must, to succeeding generations, be that due to their personal merits only, in which they differ—not to their kingly prerogative, in which they are equal. Weighed in such scales, what is the kind of merit to be chiefly regarded? Not certainly virtue; for, though this is of inestimable price, as regards the fame of a prince, it is of no avail in support of his opinions, inasmuch as the silliest of mankind, whose opinion no one in his sober senses would ever think of following, or even of asking about, may be the most candid, honest, and upright of his species. But it is to wisdom, sagacity, experience, soundness of judgment, that respect is due, when we are estimating the value of any one's opinion, whether king or subject, peer or peasant.

There is a most extraordinary want of reflection, then, in the reverend editor of these letters, when he confounds the respect paid to the late king's scruples

on the catholic question, with the estimate that should be formed of his authority on that subject. He was reigning monarch, invested with all the prerogatives of the crown, and backed by much personal popularity, when all men, more or less, some a great deal too much, agreed to respect his conscientious prejudices against emancipation. But the reverend doctor, with a temporary suspension of his usual acuteness, takes this to be equivalent to a general deference to the late king's opinion, and produces some letters of his majesty, which only show, what we knew full well before, that he held such sentiments, and also, what was not known before, how very ill he could express them—how little he had profited by the diffusion of education in acquiring a tolerably correct mode of writing, and how royal a contempt of grammatical restrictions may set the head of a limited monarchy above the checks of the constitution of grammar, and the statues of Priscian and Lilly. The doctor, whose habitual sense of grammar seems to have survived the suspension of his other powers, apologizes for these inaccuracies, or rather, courtier-like, he turns them to praise of his late majesty. “They are, indeed, only a gratifying proof of the earnestness of the writer, who was more intent on the solemn importance of his subject, than on the niceties of diction,”—(p. 11.) This certainly exceeds the old excuse for bad spelling. (whereof Lord Kenyon seems to stand in need,) which a worthy magistrate urged, by throwing the blame upon the pen; his worship never thought of stating it as a proof of his honesty.

Now, the late king's authority being only entitled to deference, in respect to his acuteness and wisdom, and there being no more reason in the world for adopting his opinion on the catholic question, because he was once king, than for imitating his method of composition—what was there, let us calmly ask, in his majesty's mental constitution, that should give him any peculiar claim to the character of extraordinary sense and discernment—or to that sound, and, above all, that calm practical judgment, which lends authority to the opinions, and even invests, with a title of veneration, the

recorded sayings of deceased men? He was a good father—when not under the influence of prejudice, a kind and a just father; when under such guidance, a most harsh parent, as witness his very unfair treatment of the present king, whose filial conduct was marked, on the most trying occasions of his life, by the most exemplary respect and forbearance, and against whom, in this respect, no one ever brought any charge, except that he would not abandon his friends and his opinions, to humour that father's prejudices. He was a faithful husband, and of very retired and domestic habits; an early riser, punctual in his dealings, and a good man of business, after a regular every-day fashion. All these qualities add much, no doubt, to a man's respectability; and make his example useful in a moral point of view, if he is in a high station. But what weight do they give his opinions upon matters of church and state? What force do they lend to his arguments? While actually reigning, while backed by fleets and armies, while able to win his way to the heart, through the treasures at his disposal and the patronage in his gift, the strength of reasoning which he brings to bear on any point, may be of little consequence, because men do not, in general, much care to combat a logician who is master of many legions: But when he is gone to his account, and expectant beneficiaries come forth with posthumous adulation, or, under pretence of paying tribute to the memory of the departed prince, fawn upon the living prelate, and pursue their calling, at the risk of even vilifying the reigning monarch, and his chosen advisers,—we must plainly and frankly tell them, that the value of George the Third's doctrines now, is exactly in proportion to his sense and calmness of mind as a man, and not to either his moral virtues or his station as a sovereign. Now what rank did the late king occupy in this scale? A very humble one assuredly.

George the Third had, from nature, strong feelings; a plain, and good, but very ordinary understanding; and a turn towards obstinacy, which, in any one, is inimical to instruction, but in a prince, is apt both to increase with time, and to prevent all mental improve-

ment. His education was of the most narrow description; and he was bred up in prejudices of the most ordinary and illiberal kind, which strengthened with his years, and, at length, left his reason no room to play upon any matter of real importance. For the greater were the occasion to exercise deliberate wisdom, and to argue any point, the more prone was he to consider the subject above or beyond the reach of discussion; to regard it as a matter of feeling, or conscience, or fixed principle, and therefore to view it as a ground from which all argument was excluded, and which was sacred to the dominion of preconceived prejudices alone. This is a very ordinary cast of understanding: And they who, from obstinacy of disposition, limited comprehension, or defective tuition, are the victims of it, never fail to regard as an enemy, or a designing traitor, every one who would open their eyes to the light of the truth. "Let me live and die contented and ignorant," says one.—"None of your refinements!" echoes another.—"These are points on which I will suffer no subtleties to raise doubts," says this country gentleman.—"Away with your special-pleading niceties," cries his sapient neighbour.—"The subject is too sacred for human reason," adds a reverend justice.—"Our conscience, thank God, is beyond the reach of sophistry—of what the *liberal* call reasoning," shout the whole chorus.—So when the late Lord Melville ventured to show his late majesty that there was a great absurdity in supposing the coronation oath could bind any one for ever against doing his duty to the country, with the sanction of parliament, or could apply at all to a new state of the law and the commonwealth, he is said to have been met by these remarkable words, "None of your Scotch metaphysics!"

Such was his late majesty, in the vigour of his faculties, and the prime of life. But Dr. Phillpotts is not content with this, his best authority—these his weightiest dicta. He must needs give currency to the unfortunate king's lucubrations in the decline of life, when his reason was clouded, nay, when his faculties were on the eve, if not under the obscuration of the eclipse,

which, in 1801, darkened the royal understanding. The time which he *judiciously* selects, in his late majesty's life, for trying his intellects in conflict with those of Mr. Pitt, is the month of March, 1801, immediately before the minister resigned in the prime of his faculties, and his royal master was consigned to medical care for the last of human calamities—the greatest deprivation by which either monarchs or their subjects can be visited. It may, perhaps, be said, that the responses, without reasoning, of a mind so morbid as to become wholly alienated when pressed upon a certain topic, are not of the highest authority—particularly on that topic; that to consult one labouring under such a calamitous dispensation upon any nice point, but especially upon the very point which forms the subject of the malady, argues any thing rather than a very sound judgment in him who so consults. The late king's understanding was of so ordinary a cast, his prejudices so strong, and his reasoning powers naturally so little exercised, that his opinion, when age and disease had done nothing to impair those faculties, which nature had bestowed with no very lavish hand, and education had very scantily improved, would have been of very little weight with reasonable men. Upon any matter of mere feeling in either public or private affairs, the sentiments were well worth having of so right-hearted a man, one whose good dispositions in domestic life were so much less sophisticated by the follies of a court, or perverted by the corruptions of power, than almost any other sovereign's of whom we have had recent experience. But, at the best, his notions upon government and policy were of a limited and contracted cast, and so often under the dominion of incurable prejudice and personal feeling, that no reliance at all could be placed on their justness. Why should we confine the use of his name to one question alone, and that the question, of a mixed nature, religious as well as political, which was most likely to excite his strongest prejudices, and most unregulated feelings? Let us try the soundness of this test by consulting the responses of the same oracle on other subjects.

If the late king's opinion had been infallible, nay, if any weight whatever had been allowed to it, no advances could ever have been made towards peace, either with the republic or the Emperor of France. Possibly some may agree in this love of eternal war, rather than treat with illegitimate authorities: But the same creed would have denounced all acknowledgment of the independence of South America, as the last of national crimes,—and all from a personal motive—because the late king's first misadventure was a disastrous war with his own colonies. To the gratification of this *pique*,—the prejudice arising from a more sense of personal affront,—the sovereign was ready to sacrifice every consideration of public policy; and his wish—his deliberate judgment,—if consulted, must have led to everlasting hostility with all revolted colonies. He had a strong prejudice, too, against the abolition of the slave trade; and though he never interfered actively to prevent it, yet, had he been followed as an authority, the most righteous and glorious measure of his long reign never would have been carried. Does any one doubt that his opinion would have held the Navigation act sacred, in every letter of every clause? Does any man question his disposition to keep every thing in our criminal law, the worst as well as the best parts of it, for ever in the self-same condition in which it had come down to him from the Tudors and the Plantagenets? That we are to regard as the oracles of perfect wisdom, all the notions of a prince whose views were a century behind the present day,—because in moral and domestic demeanour, he far excelled most of his exalted rank, is really a position so extravagant that we should never have dreamt of combating it, had not the publication before us proceeded upon the full adoption of it.

But if the late king's authority, at the best period of his life, was little to be regarded, merely as an authority, what shall be said of those who give it forth as very wisdom, when the monarch was in the decline of his life—and when his reason was bowed, or at least bending under disease! Such, however, is the period when the most important of the documents before us were pre-

pared, and used by his late majesty, in his communications with his servants. The use covertly made of the late king's authority, has done so much harm to the catholic question, that we, its warm supporters, could have desired no greater boon than such an exposition of the weakness of that ground, as its avowed enemies have, in this publication, furnished by their indiscreet and unthinking zeal. But we owe them, on behalf of that great cause, a more lasting obligation. They have put forth the king's prejudice,—it can hardly be called his opinion,—in all the nakedness of such an authority unsupported by argument; and they have placed by its side, not merely the far higher authority of Mr. Pitt, but his reasons, his unanswerable reasons, for espousing the opinion which he always strenuously maintained, and to which he once sacrificed his office. The tract before us acquires a very high value from this circumstance.

It opens in a solemn strain with the coronation oath, carefully copied from the statute and the liturgy. This is fair and candid; and it puts an end to the whole question. It is quite decisive of the whole crotchet—argument we cannot call it—put into the good old king's head by some wily intriguing courtiers for their own sinister purposes, and which Lord Liverpool himself, with all his no Popery violence, could not gravely defend, but abandoned as stark nonsense. The archbishop says:—"Will you solemnly promise and swear to govern the people of this kingdom of England and the dominions thereto belonging, *according to the statutes in parliament agreed on, and the laws and customs of the same?*" The king's answer is,—"*I solemnly promise to do so.*" Now, no man—not certainly the late king, who gave his assent to acts unnumbered, repealing the old laws and customs of the realm, nor the Duke of York, who supported those changes—ever could maintain that this involves a promise to govern by the statutes *then* in being, but only by such statutes as should at any time be agreed on. Then comes a similar promise to execute law and justice in mercy, subject to the former promise, of course, and only implying an administering justice and law in mercy, according to whatever law may be established.

Next is the promise in dispute: "will you to the utmost of your power, maintain the laws of God, the true profession of the Gospel, and the protestant reformed religion *established by law*; and will you preserve unto the bishops and clergy of this realm, and to the churches committed to their charge, all such rights and privileges as *by law do or shall* appertain unto them or any of them?" The answer is, "all this I promise to do." This really should seem as if the crotchet had been foreseen by the wise framers of the oath, so excellently are the words contrived to prevent it. Not only does the first promise ride over the whole; the promise to execute *the law* mercifully, whatever the law may at any time be, as well as the promise to preserve the established religion and hierarchy—but even if this third promise be taken by itself, its language is so clear as to be incapable of misconstruction, without wilful blindness, and the most perverse and wrong-headed ingenuity. The thing promised is, to support the religion established *by law*; the rights and privileges promised to be preserved, are those which "*are or shall*" be given to the church "*by law*." The oath plainly applies to the conduct of the king in his executive capacity, not as a branch of the legislature; it binds him to reign according to law in his conduct as king; it forbids him either to hang men without lawful judgment, or to attack the church illegally; or to take from religion its lawful sanction; or to take from the church its lawful rights. If this be not the construction, how could George the Third, with a safe conscience, take from parsons the right of non-residence, by one law, and force them, by another to pay their curates a certain sum? But how, above all, could he emancipate the catholics, in respect of four-fifths of their disabilities; giving them the right to vote for members of parliament, while he only withheld the right to sit in that assembly? Giving the publication of the very words of the oath, is candid and useful in the controversy; for the unlettered reader, who sees the reverend editor's preface, and the royal author's doubts, would be apt to suppose that the latter had, in the year 1761, sworn to refuse his assent to all bills for relieving

his catholic subjects, and to turn out whatever minister advised him on the subject.

The monarch's letters begin with one to Lord Kenyon, in the following words. The composition, so greatly admired by Dr. Phillpotts, we say nothing of; but we much question the fairness, if not the constitutionality, of secretly consulting a chief-justice and an attorney-general, instead of a cabinet minister, upon the policy to be pursued on a great question of state.

"No. 1.—TO THE LORD KENYON.

"Queen's House, March 7, 1795.

"The question that has been so improperly patronised by the lord lieutenant of Ireland in favour of the papists, though certainly very properly silenced here, yet it seems not to have been viewed in what seems to me the strongest point of view—its militating against the coronation oath and many existing statutes. I have, therefore, stated the accompanying queries on paper, to which I desire the Lord Kenyon will, after due consideration, state his opinion in the same manner, and should be glad if he would also acquire the sentiments of the attorney-general on this most serious subject.

"GEORGE R."

In answer to the questions accompanying this note, Lord Kenyon, with the concurrence of the attorney-general, afterwards Lord Eldon, stated, in substance, that the passing a law in favour of the catholics was a perfectly lawful measure, and that no oath bound, or could bind, the king to refuse his consent to any such law. The letter of Mr. Pitt, dated January 31, 1801, is a most plain and able exposition of his sentiments upon the subject, in general, of the catholic claims, and we deem its insertion here next to a duty:—

"Downing-street, Saturday, Jan. 31, 1801.

"Mr. Pitt would have felt it, at all events, his duty, previous to the meeting of parliament, to submit to your

majesty the result of the best consideration which your confidential servants could give to the important questions respecting the catholics and dissenters, which must naturally be agitated in consequence of the union. The knowledge of your majesty's general indisposition to any change of the laws on this subject, would have made this a painful task to him; and it is become much more so, by learning from some of his colleagues, and from other quarters, within these few days, the extent to which your majesty entertains, and has declared, that sentiment.

"He trusts your majesty will believe that every principle of duty, gratitude, and attachment, must make him look to your majesty's ease and satisfaction, in preference to all considerations, but those arising from a sense of what, in his honest opinion, is due to the real interest of your majesty and your dominions. Under the impression of that opinion, he has concurred in what appeared to be the prevailing sentiments of the majority of the cabinet—that the admission of the catholics and dissenters to offices, and of the catholics to parliament, (from which latter the dissenters are now excluded) would, under certain conditions to be specified, be highly advisable, with a view to the tranquillity and improvement of Ireland, and to the general interest of the united kingdom.

"For himself, he is, on full consideration, convinced that the measure would be attended with no danger to the established church, or to the protestant interest in Great Britain or Ireland: that, now the union has taken place, and with the new provisions which make part of the plan, it could never give any such weight in office, or in parliament, either to catholics or dissenters, as could give them any new means (if they were so disposed) of attacking the establishment;—that the grounds, on which the laws of exclusion now remaining were founded, have long been narrowed, and are since the union removed—that those principles, formerly held by the catholics, which made them be considered as politically dangerous, have been for a course of time gradually declining, and, among the higher orders particu-

larly, they have ceased to prevail. That the obnoxious tenets are disclaimed in the most positive manner by the oaths, which have been required in Great Britain, and still more by one of those required in Ireland, as the condition of the indulgences already granted, and which might equally be made the condition of any new ones. That if such an oath, containing (among other provisions) a denial of the power of absolution from its obligations, is not a security from catholics, the sacramental test is not more so. That the political circumstances under which the exclusive laws originated, arising either from the conflicting power of hostile and nearly balanced sects, from the apprehension of a popish queen or successor, a disputed succession, and a foreign pretender, and a division in Europe between catholic and protestant powers, are no longer applicable to the present state of things. That with respect to those of the dissenters, who, it is feared, entertain principles dangerous to the constitution, a distinct political test, pointed against the doctrine of modern Jacobinism, would be a much more just and more effectual security than that which now exists, which may operate to the exclusion of conscientious persons well affected to the state, and is no guard against those of an opposite description. That with respect to the catholics of Ireland, another most important additional security, and one of which the effect would continually increase, might be provided, by gradually attaching the popish clergy to the government, and for this purpose making them dependent for a part of their provision (under proper regulations) on the state, and by also subjecting them to superintendence and control:—That, besides these provisions, the general interests of the established church, and the security of the constitution and government, might be effectually strengthened by requiring the political test, before referred to, from the preachers of all catholic or dissenting congregations, and from the teachers of schools of every denomination.

“It is on these principles Mr. Pitt humbly conceives a new security might be obtained for the civil and ecclesiastical constitution of this country, more applicable

to its present circumstances, more free from objection, and more effectual in itself, than any which now exists, and which would at the same time admit of extending such indulgences as must conciliate the higher orders of the catholics, and by furnishing to a large class of your majesty's Irish subjects a proof of the good-will of the united parliament, afford the best chance of giving full effect to the great object of the union—that of tranquillizing Ireland, and attaching it to this country.

“It is with inexpressible regret, after all he now knows of your majesty's sentiments, that Mr. Pitt troubles your majesty, thus at large, with the general grounds of his opinion, and finds himself obliged to add, that *this opinion is unalterably fixed in his mind*. It must therefore ultimately guide his political conduct, if it should be your majesty's pleasure, that, after thus presuming to open himself fully to your majesty, he should remain in that responsible situation, in which your majesty has so long condescended graciously and favourably to accept his services. It will afford him, indeed, a great relief and satisfaction, if he may be allowed to hope that your majesty will deign maturely to weigh what he has now humbly submitted, and to call for any explanation which any parts of it may appear to require.

“In the interval which your majesty may wish for consideration, he will not, on his part, importune your majesty with any unnecessary reference to the subject; and will feel it his duty to abstain himself from all agitation of this subject in parliament, and to prevent it, as far as depends on him, on the part of others. If, on the result of such consideration, your majesty's objections to the measure proposed should not be removed, or sufficiently diminished to admit of its being brought forward with your majesty's full concurrence, and with the whole weight of government, it must be personally Mr. Pitt's first wish to be released from a situation, which he is conscious that, under such circumstances, he could not continue to fill but with the greatest disadvantage.

“At the same time, after the gracious intimation which has been recently conveyed to him, of your ma-

jesty's sentiments on this point, he will be acquitted of presumption in adding, that if the chief difficulties of the present crisis should not then be surmounted, or very materially diminished, and if your majesty should continue to think that his humble exertions could, in any degree, contribute to conducting them to a favourable issue, there is no personal difficulty to which he will not rather submit, than withdraw himself at such a moment from your majesty's service. He would even, in such a case, continue for such a short farther interval as might be necessary, to oppose the agitation or discussion of the question, as far as he can consistently with the line, to which he feels bound uniformly to adhere, of reserving to himself a full latitude on the principle itself, and objecting only to the time, and to the temper and circumstances of the moment. But he must entreat that, on this supposition, it may be distinctly understood, that he can remain in office no longer than till the issue (which he trusts on every account will be a speedy one) of the crisis now depending, shall admit of your majesty's more easily forming a new arrangement; and that he will then receive your majesty's permission to carry with him into a private situation that affectionate and grateful attachment, which your majesty's goodness, for a long course of years, has impressed on his mind—and that unabated zeal for the ease and honour of your majesty's government, and for the public service, which he trusts will always govern his conduct.

“He has only to entreat your majesty's pardon for troubling you on one other point, and taking the liberty of most respectfully, but explicitly, submitting to your majesty the indispensable necessity of effectually discountenancing, in the whole of the interval, all attempts to *make use of your majesty's name, to influence the opinion of any individuals*, or descriptions of men, on any part of this subject.”

In answer to this frank and manly statement, we have a letter from his late majesty, not very much distinguished, either by these qualities, or by any signal cogency of reasoning or felicity of expression. We cite it as the document which Dr. Phillpotts, of course,

has found to be more efficacious towards conviction than the argument of the minister:—

“ B.—THE KING’S ANSWER TO A—

“ Queen’s House, Feb. I, 1801.

“ I should not do justice to the warm impulse of my heart, if I entered on the subject most unpleasant to my mind, without first expressing, that the cordial affection that I have for Mr. Pitt, as well as high opinion of his talents and integrity, greatly add to my uneasiness on this occasion; but a *sense of religious as well as political duty has made me, from the moment I mounted the throne*, consider the oath that the wisdom of our forefathers has enjoined the kings of this realm to take at their coronation, and enforced by the obligation of instantly following it in the course of the ceremony, with taking the sacrament, as so binding a religious obligation on me to maintain the fundamental maxims on which our constitution is placed, namely, the Church of England being the established one, and that those who hold employments in the state, must be members of it, and consequently obliged not only to take oaths against Popery, but to receive the Holy Communion agreeably to the rites of the Church of England.

“ This principle of duty must, therefore, prevent me from discussing any proposition tending to destroy this groundwork of our happy constitution, and much more so that now mentioned by Mr. Pitt, which is no less than the complete overthrow of the whole fabric.

“ When the Irish propositions were transmitted to me by a joint message from both Houses of the British Parliament, I told the lords and gentlemen sent on that occasion, that I would with pleasure, and without delay, forward them to Ireland; but that, as individuals, I could not help acquainting them, that my inclination to a union with Ireland was principally founded on a trust, that the uniting the Established Churches of the two

kingdoms would for ever shut the door to any farther measures with respect to the Roman Catholics.

“ These two instances must show Mr. Pitt, *that my opinions are not those formed on the moment, but such as I have imbibed for forty years, and from which I never can depart*; but, Mr. Pitt once acquainted with my sentiments, his assuring me that he will stave off the only question whereon I fear, from his letter, we can never agree—for the advantage and comfort of continuing to have his advice and exertions in public affairs, I will certainly abstain from talking on this subject, which is the one nearest my heart. I cannot help, if others pretend to guess at my opinions, which I have never disguised; but if those who unfortunately differ with me will keep this subject at rest, I will, on my part, most correctly on my part, be silent also; but this restraint I shall put on myself from affection for Mr. Pitt, but farther I cannot go, for I cannot sacrifice my duty to any consideration.

“ Though I do not pretend to have the power of changing Mr. Pitt's opinion, when thus unfortunately fixed, yet I shall hope his sense of duty will prevent his retiring from his present situation to the end of my life, for I can with great truth assert, that I shall, from public and private considerations, feel great regret, if I shall ever find myself obliged, at any time, from a sense of religious and political duty, to yield to his entreaties of retiring from his seat at the Board of Treasury.”

Now, it is quite impossible, that one having all his faculties about him could write this, with the regard to truth which the late king has been so much praised for. He says, that from the moment he mounted the throne,—that is, since 1760,—he had held the same opinions, and felt the same scruples upon the Coronation Oath. The purpose of this statement is, to introduce the assertion that his present opinions are “ such as he had imbibed for forty years.” Were they so? Then, to say nothing of the forty Indemnity bills which he had made laws, how did he, how came he to pass the Irish acts of 1778 and 1793, which took off infinitely more restrictions from the catholics than they left behind them?

The supposition would be absurd as well as indecent, that his majesty intended to deceive Mr. Pitt upon a matter of recent history and public notoriety; and the inference, therefore, is unavoidable, that the king's mind was not in its pristine vigour when he penned this letter.

Mr. Pitt's letter justly and plainly, though respectfully, required the king not to use his personal influence against the question, as long as he continued his minister; of course, meaning to state, that he could not submit to be the responsible minister of a prince whose weight was thrown into the scale of what he himself deemed a pernicious policy. The king's answer on this point is not satisfactory; and it produced the following excellent reply:—

MR. PITT, IN REPLY.

“Downing Street, Tuesday, Feb. 3, 1801.

“Mr. Pitt cannot help entreating your majesty's permission to express how very sincerely he is penetrated with the affecting expressions of your majesty's kindness and goodness to himself, on the occasion of the communication with which he has been under the necessity of troubling your majesty. It is, therefore, with additional pain he feels himself bound to state, that the final decision which your majesty has formed on the great subject in question, (the motives to which he respects and honours,) and his own unalterable sense of the line which public duty requires from him, must make him consider the moment as now arrived, when, on the principles which he has already explained, it must be his first wish to be released, as soon as possible, from his present situation. He certainly retains the same anxious desire, in the time and mode of quitting it, to consult, as much as possible, your majesty's ease and convenience, and to avoid embarrassment. But he must frankly confess to your majesty, that the difficulty even of his temporary continuance must necessarily be increased, and may very shortly become insuperable, from what he conceives to be the import of

one passage in your majesty's note, which hardly leaves him room to hope, that your majesty thinks those steps can be taken for effectually discountenancing all attempts to make use of your majesty's name, or to influence opinions on this subject, which he has ventured to represent as indispensably necessary during any interval in which he might remain in office. He has, however, the less anxiety in laying this sentiment before your majesty, because, independent of it, he is more and more convinced, that, your majesty's final decision being once taken, the sooner he is allowed to act upon it, the better it will be for your majesty's service. He trusts, and sincerely believes, that your majesty cannot find any long delay necessary for forming an arrangement for conducting your service with credit and advantage; and that, on the other hand, the feebleness and uncertainty, which is almost inseparable from a temporary government, must soon produce an effect, both at home and abroad, which might lead to serious inconvenience. —Mr. Pitt trusts your majesty will believe, that a sincere anxiety for the future ease and strength of your government, is one strong motive for his presuming thus to press this consideration."

The correspondence closes with a short letter from the Duke of York,—to whom, it should seem, the whole had been sent, for his edification, by the king; apparently a superfluous care, as His Royal Highness's answer shows:—

“York House, Feb. 13, 1801.

“SIR,

“I have the honour to return your majesty the papers which you were graciously pleased to allow me to peruse.

“If my sentiments upon the question of catholic emancipation, and of the repeal of the test act, had not been already immutably fixed, the arguments adduced in favour of the measure would alone have been sufficient to have convinced me of the danger, if not of the absolute certainty, of the dreadful consequences of

its being carried into execution.—I have the honour to be, sir, your majesty's most dutiful son and subject,
“FREDERICK.”

This, too, we presume, is given to the public by the reverend editor, as a binding authority in favour of his much-cherished faith in the principles of exclusion and intolerance. Any thing more ridiculous we cannot well imagine. The poor duke—whose death has been much lamented, certainly, for the qualities of his heart, and for the capacity with which he was endowed—receives a cogent piece of reasoning by Mr. Pitt—and a bare expression of the king's opposite opinion, unsupported by one single reason of any kind—and he speaks of “the arguments adduced in favour of the measure,” as quite sufficient to prove “the danger, if not the absolute certainty of its dreadful consequences!” Such answers to Mr. Pitt befit well an acting commander-in-chief.

It is impossible to read the above letters of Mr. Pitt, and to mark the honest earnestness and solid grounds of his opinion upon this great question, without marveling at the audacity of many of those who, calling themselves his followers, and assuming his name, form themselves into associations, the main purpose of which is to oppose the very question he was so sincerely devoted to. What is now called a Pitt Club often signifies little else than a knot of narrow-minded persons, who are banded together by the fixed determination to oppose the principles of Mr. Pitt, upon the greatest point on which he ever thought and acted for himself. To their orgies, therefore, we cannot but think that no real friend, no true admirer, of Mr. Pitt, can consistently resort. Every feeling of respect for his memory must make them shun such an insult to his name, as could only be out done by some gang of slave-dealers who should call themselves the Wilberforce Club, and exert themselves, under that appellation, for the perpetuity of slavery, and the revival of the slave-trade.

DISCOURSE ON THE OBJECTS, ADVANTAGES, AND PLEA- SURES OF SCIENCE.

INTRODUCTION.

IN order fully to understand the advantages and the pleasures which are derived from an acquaintance with any science, it is necessary to become acquainted with that science; and it would therefore be impossible to convey a complete knowledge of the benefits conferred by a study of the various sciences which have hitherto been cultivated by philosophers, without teaching all the branches of them. But a very distinct idea may be given of those benefits, by explaining the nature and objects of the different sciences; it may be shown, by examples, how much use and gratification there is in learning a part of any one branch of knowledge; and it may thence be inferred, how great reason there is to learn the whole.

It may easily be demonstrated, that there is an advantage in learning, both for the usefulness and the pleasure of it. There is something positively agreeable to all men, to all at least whose nature is not most grovelling and base, in gaining knowledge for its own sake. When you see any thing for the first time, you at once derive some gratification from the sight, being new; your attention is awakened, and you desire to know more about it. If it is a piece of workmanship,

as an instrument, a machine of any kind, you wish to know how it is made; how it works; and what use it is of. If it is an animal, you desire to know where it comes from; how it lives; what are its dispositions, and, generally, its nature and habits. You feel this desire, too, without at all considering that the machine or the animal may ever be of the least use to yourself practically; for, in all probability, you may never see them again. But you have a curiosity to learn all about them, because they are new and unknown. You accordingly make inquiries; you feel a gratification in getting answers to your questions, that is, in receiving information, and in knowing more,—in being better informed than you were before. If you happen again to see the same instrument or animal, you find it agreeable to recollect having seen it formerly, and to think that you know something about it. If you see another instrument or animal, in some respects like, but differing in other particulars, you find it pleasing to compare them together, and to note in what they agree, and in what they differ. Now, all this kind of gratification is of a pure and disinterested nature, and has no reference to any of the common purposes of life; yet it is a pleasure—an enjoyment. You are nothing the richer for it; you do not gratify your palate or any other bodily appetite; and yet it is so pleasing, that you would give something out of your pocket to obtain it, and would forego some bodily enjoyment for its sake. The pleasure derived from science is exactly of the like nature, or, rather, it is the very same. For what has just been spoken of is, in fact, science, which in its most comprehensive sense only means *knowledge*, and in its ordinary sense means *knowledge reduced to a system*; that is, arranged in a regular order, so as to be conveniently taught, easily remembered, and readily applied.

The practical uses of any science or branch of knowledge are undoubtedly of the highest importance; and there is hardly any man who may not gain some positive advantage in his worldly wealth and comforts, by increasing his stock of information. But there is

also a pleasure in seeing the uses to which knowledge may be applied, wholly independent of the share we ourselves may have in those practical benefits. It is pleasing to examine the nature of a new instrument, or the habits of an unknown animal, without considering whether or not they may ever be of use to ourselves or to any body. It is another gratification to extend our inquiries, and find that the instrument or animal is useful to man, even although we have no chance ourselves of ever benefiting by the information: as, to find that the natives of some distant country employ the animal in travelling:—nay, though we have no desire by benefiting by the knowledge; as, for example, to find that the instrument is useful in performing some dangerous surgical operation. The mere gratification of curiosity: the knowing more to-day than we knew yesterday; the understanding clearly what before seemed obscure and puzzling; the contemplation of general truths, and the comparing together of different things,—is an agreeable occupation of the mind; and, beside the present enjoyment, elevates the faculties above low pursuits, purifies and refines the passions, and helps our reason to assuage their violence.

It is very true, that the fundamental lessons of philosophy may to many, at first sight, wear a forbidding aspect, because to comprehend them requires an effort of the mind, somewhat, though certainly not much, greater than is wanted for understanding more ordinary matters; and the most important branches of philosophy, those which are of the most general application, are for that very reason the less easily followed, and the less entertaining when apprehended, presenting as they do few particulars or individual objects to the mind. In discoursing of them, moreover, no figures will be at present used to assist the imagination; the appeal is made to reason, without help from the senses. But be not, therefore, prejudiced against the doctrine, that the pleasure of learning the truths which philosophy unfolds is truly above all price. Lend but a patient attention to the principles explained; and, giving us credit for stating nothing which has not some practical use be-

longing to it, or some important doctrine connected with it, you will soon perceive the value of the lessons you are learning, and begin to interest yourselves in comprehending and recollecting them; you will find that you have actually learnt something of science, while merely engaged in seeing what its end and purpose is; you will be enabled to calculate for yourselves, how far it is worth the trouble of acquiring, by examining samples of it; you will, as it were, taste a little, to try whether or not you relish it, and ought to seek after more; you will enable yourselves to go on, and enlarge your stock of it; and after having first mastered a very little, you will proceed so far as to look back with wonder at the distance you have reached beyond your earliest acquirements.

The sciences may be divided into three great classes; those which relate to *number and quantity*—those which relate to *matter*—and those which relate to *mind*. The first are called the *mathematics*, and teach the properties of numbers and of figures; the second are called *natural philosophy*, and teach the properties of the various bodies which we are acquainted with by means of our senses; the third are called *intellectual or moral philosophy*, and teach the nature of the mind, of the existence of which we have the most perfect evidence in our own reflections; or, in other words, they teach the moral nature of man, both as an individual and as a member of society. Connected with all the sciences, and subservient to them, though not one of their number, is *history*, or the record of facts relating to all kinds of knowledge.

I. MATHEMATICAL SCIENCE.

THE two great branches of the *Mathematics*, or the two mathematical sciences, are *Arithmetic*, the science of number, from the Greek word signifying *number*; and *Geometry*, the science of figure, from the Greek words signifying *measure of the earth*,—land-measuring having first turned men's attention to it.

When we say that 2 and 2 make 4, we state an arith-

metrical proposition, very simple, indeed, but connected with many others of a more difficult and complicated kind. Thus, it is another proposition, somewhat less simple, but still very obvious, that 5 multiplied by 10, and divided by 2, is equal to, or makes the same number with, 100 divided by 4—both results being equal to 25. So, to find how many farthings there are in 1000*l.*, and how many minutes in a year, are questions of arithmetic which we learn to work by being taught the principles of the science one after another, or, as they are commonly called, the *rules* of addition, subtraction, multiplication, and division. Arithmetic may be said to be the most simple, though among the most useful of the sciences; but it teaches only the properties of particular and known numbers, and it only enables us to add, subtract, multiply, or divide numbers which we have not yet ascertained, and in all respects to deal with them as if they were known, for the purpose of arriving at certain conclusions respecting them, and, among other things, of discovering what they are; or, suppose we would examine properties belonging to all numbers: this must be performed by a peculiar kind of arithmetic, called *universal* arithmetic, or *Algebra*.* The common arithmetic, you will presently perceive, carries the seeds of this most important science in its bosom. Thus, suppose we inquire what is the number which multiplied by 5 makes 10? This is found if we divide 10 by 5,—it is 2: but suppose that, before finding this number 2, and before knowing what it is, we would add it, whatever it may turn out, to some other number: this can only be done by putting some mark, such as a letter of the alphabet, to stand for the unknown number, and adding that letter as if it were a known number. Thus, suppose we want to find two numbers which, added together, make 9, and multiplied by one another, make 20. There are many which, added together, made 9; as 1 and 8; 2 and 7; 3 and 6; and so on. We have, therefore, occasion to use the second con-

* Algebra, from the Arabic words signifying the *reduction of fractions*; the Arabs having brought the knowledge of it into Europe.

dition, that multiplied by one another they should make 20, and to work upon this condition before we have discovered the particular numbers. We must, therefore, suppose the numbers to be found, and put letters for them, and by reasoning upon those letters, according to both the two conditions of adding and multiplying, we find what they must each of them be in figures, in order to fulfil or answer the conditions. Algebra teaches the rules for conducting this reasoning, and obtaining this result successfully; and by means of it we are enabled to find out numbers which are unknown, and of which we only know that they stand in certain relations to known numbers, or to one another. The instance now taken is an easy one; and you could, by considering the question a little, answer it readily enough; that is, by trying different numbers, and seeing which suited the conditions; for you plainly see that 5 and 4 are the two numbers sought; but you see this by no certain or general rule applicable to all cases, and, therefore, you could never work more difficult questions in the same way; and even questions of a moderate degree of difficulty, would take an endless number of trials or guesses to answer. Thus, a shepherd sold his flock for 80*l.*; and if he had sold four sheep more for the same money, he would have received one pound less for each sheep. To find out from this, how many the flock consisted of, is a very easy question in algebra, but would require a vast many guesses, and a long time to hit upon by common arithmetic.* And questions infinitely more difficult can easily be solved by the rules of algebra. In like manner, by arithmetic you can tell the properties of particular numbers; as, for instance, that the number 348 is divided by 3 exactly, so as to leave nothing over: but algebra teaches us that it is only one of an infinite variety of numbers, all divisible by 3, and any one of which you can tell the moment you see it; for they all have the remarkable property, that if you add together the figures they consist of, the sum total is divisible by 3. You can easily perceive this in

* It is 16.

any one case, as in the number mentioned, for 3 added to 4 and that to eight 8 make 15, which is plainly divisible by 3; and if you divide 348 by 3, you find the quotient to be 116, with nothing over. But this does not at all prove that any other number, the sum of whose figures is divisible by three, will itself also be found divisible by 3, as 741; for you must actually perform the division here, and in every other case, before you can know that it leaves nothing over. Algebra, on the contrary, both enables you to discover such general properties, and to prove them in all their generality.*

By means of this science, and its various applications, the most extraordinary calculations may be performed. We shall give, as an example, the method of *Logarithms*, which proceeds upon this principle. Take a set of numbers, going on by equal differences; that is to say, the third being as much greater than the second, as the second is greater than the first, and the common difference being the number you begin with; thus, 1, 2, 3, 4, 5, 6, and so on, in which the common difference is 1: then take another set of numbers, such that each is equal to twice or three times the one before it, or any number of times the one before it, but the common multiplier being the number you begin with: thus, 2, 4, 8, 16, 32, 64, 128; write this second set of numbers under the first, or side by side, so that the numbers shall stand opposite to one another, thus,

1	2	3	4	5	6	7
2	4	8	16	32	64	128

you will find, that if you add together any two of the upper or first set, and go to the number opposite their

* Another class of numbers divisible by 3 is discovered in like manner by algebra. Every number of three places, the figures (or digits) composing which are in arithmetical progression, (or rise above each other by equal differences,) is divisible by three; as, 123, 789, 357, 159, and so on. The same is true of numbers of any amount of places, provided they are composed of 3, 6, 9, &c., numbers arising above each other by equal differences, as 289, 290, 309, or 148, 214, 280, or 307142085345648276198756, which number of 24 places is divisible by 3, being composed of 6 numbers in a series whose common difference is 1137. This property, too, is only a particular case of a much more general one.

sum, in the lower or second set, you will have in this last set the number arising from multiplying together the numbers of the lower set corresponding or opposite to the numbers added together. Thus, add 2 to 4, you have six in the upper set, opposite to which in the lower set is 64, and multiplying the numbers 4 and 16 opposite to 2 and 4, the product is 64. In like manner, if you subtract one of the upper numbers from another, and opposite to their difference in the upper line, you look to the lower number, it is the quotient found from dividing one of the lower numbers by the other opposite to the subtracted ones. Thus, take 4 from 6 and 2 remains, opposite to which you have in the lower line 4; and if you divide 64, the number opposite to 6, by 16, the number opposite to 4, the quotient is 4. The upper set are called the *logarithms* of the lower set, which are called *natural numbers*; and tables may, with a little trouble, be constructed, giving the logarithms of all numbers from 1 to 10,000 and more: so that, instead of multiplying or dividing one number by another, you have only to add or subtract their logarithms, and then you at once find the product or the quotient in the tables. These are made applicable to numbers far higher than any actually in them, by a very simple process: so that you may at once perceive the prodigious saving of time and labour which is thus made. If you had, for instance, to multiply 7,543,283 by itself, and that product again by the original number, you would have to multiply a number of 7 places of figures by an equally large number, and then a number of 14 places of figures by one of 7 places, till at last you had a product of 21 places of figures—a very tedious operation; but, working by logarithms, you would only have to take three times the logarithm of the original number, and that gives the logarithm of the last product of 21 places of figures, without any farther multiplication. So much for the time and trouble saved, which is still greater in questions of division; but by means of logarithms many questions can be worked, and of the most important kind, which no time or labour would otherwise enable us to resolve.

Geometry teaches the properties of figure, or particu-

lar portions of space, and distances of points from each other. Thus, when you see a triangle, or three-sided figure, one of whose sides is perpendicular to another side, you find, by means of geometrical reasoning respecting this kind of triangle, that if squares be drawn on its three sides, the large square upon the slanting side opposite the two perpendiculars, is exactly equal to the two smaller squares upon the perpendiculars, taken together; and this is absolutely true, whatever be the size of the triangle, or the proportions of its sides to each other. Therefore, you can always find the length of any one of the three sides by knowing the lengths of the other two. Suppose one perpendicular side to be 3 feet long, the other 4, and you want to know the length of the third side opposite to the perpendicular; you have only to find a number such, that if, multiplied by itself, it shall be equal to 3 times 3, together with 4 times 4, that is 25.* (This is number 5.)

Now only observe the great advantage of knowing this property of the triangle, or of perpendicular lines. If you want to measure a line passing over ground which you cannot reach—to know, for instance, the length of one side covered with water of a field, or the distance of one point on a lake or bay from another point on the opposite side—you can easily find it by measuring two lines perpendicular to one another on the dry land, and running through the two points; for the line wished to be measured, and which runs through the water, is the third side of a perpendicular-sided triangle, the other two sides of which are ascertained. But there are other properties of triangles, which enable us to know the length of two sides of any triangle, whether it has perpendicular sides or not, by measuring one side, and also measuring the inclination of the other two sides to this side, or what is called the two *angles* made by those sides with the measured side. There-

* It is a property of numbers, that every number whatever, whose last place is either 5 or 0, is, when multiplied into itself, equal to two others which are square numbers, and divisible by 3 and 4 respectively:—thus, $45 \times 45 = 2025 = 729 + 1296$, the squares of 27 and 36; and $60 \times 60 = 3600 = 1296 + 2304$, the squares of 36 and 48.

fore you can easily find the perpendicular line drawn, or supposed to be drawn, from the top of a mountain through it to the bottom, that is the height of the mountain; for you can measure a line on level ground, and also the inclination of two lines, supposing them drawn in the air, and reaching from the two ends of the measured line to the mountain's top; and having thus found the length of the one of those lines next the mountain, and its inclination to the ground, you can at once find the perpendicular, though you cannot possibly get near it. In the same way, by measuring lines and angles on the ground, and near, you can find the length of lines at a great distance, and which you cannot approach: for instance, the length and breadth of a field on the opposite side of a lake or sea: the distance of two islands, or the space between the tops of two mountains.

Again, there are *curve-lined* figures as well as straight, and geometry teaches the properties of these also. The best known of all the curves is the *circle*, or a figure made by drawing a string round one end which is fixed, and marking where its other end traces, so that every part of the circle is equally distant from the fixed point or centre. From this fundamental property, an infinite variety of others follow by steps of reasoning more or less numerous, but all necessarily arising one out of another. To give an instance; it is proved by geometrical reasoning, that if from the two ends of any diameter of the circle you draw two lines to meet in any one point of the circle whatever, those lines are perpendicular to each other.

Another property, and a most useful one, is, that the sizes, or areas, of all circles whatever, from the greatest to the smallest, from the sun to a watch-dial-plate, are in exact proportion to the squares of their distances from the centre; that is, the squares of the strings they are drawn with: so that if you draw a circle with a string 5 feet long, and another with a string 10 feet long, the large circle is four times the size of the small one, as far as the space or area enclosed is concerned; the square of 10 or 100 being four times the square of 5 or 25. But it is also true, that the lengths of the cir-

cumferences themselves, the number of feet over which the ends of the strings move, are in proportion to the lengths of the strings: so that the curve of the larger circle is only twice the length of the curve of the lesser.

But the circle is only one of an infinite variety of curves, all having a regular formation and fixed properties. The *oval* or *ellipse* is, perhaps, next to the circle, the most familiar to us, although we more frequently see another curve, the line formed by the motion of bodies thrown forward. When you drop a stone, or throw it straight up, it goes in a straight line; when you throw it forward, it goes in a curve line till it reaches the ground; as you may see by the figure in which water runs when forced out of a pump, or from a fire-pipe, or from the spout of a kettle or tea-pot. The line it moves in is called a *parabola*; every point of which bears a certain fixed relation to a certain point within it, as the circle does to its centre. Geometry teaches various properties of this curve: for example, if the direction in which the stone is thrown, or the bullet fired, or the water spouted, be half the perpendicular to the ground, that is, half way between being level with the ground and being upright, the curve will come to the ground at a greater distance than if any other direction whatever were given, with the same force. So that to make the gun carry farthest, or the fire-pipe play to the greatest distance, they must be pointed, not, as you might suppose, level or point blank, but about half way between that direction and the perpendicular. If the air did not resist, and so somewhat disturb the calculation, the direction to give the longest range ought to be exactly half perpendicular.

The *oval*, or *ellipse*, is drawn by taking a string of any certain length, and fixing, not one end as in drawing the circle, but both ends to different points, and then carrying a point round inside the string, always keeping it stretched as far as possible. It is plain, that this figure is as regularly drawn as the circle, though it is very different from it; and you perceive that every point of its curve must be so placed, that the straight

lines drawn from it to the two points where the string was fixed, are, when added together, always the same; for they make together the length of the string.

Among various properties belonging to this curve, in relation to the straight lines drawn within it, is one which gives rise to the construction of the *trammels*, or elliptic compasses, used for making figures and ornaments of this form; and also to the construction of lathes for turning oval frames, and the like.

If you wish at once to see these three curves, take a pointed sugar-loaf, and cut it any where clean through in a direction parallel to its base or bottom; the outline or edge of the loaf where it is cut will be a *circle*. If the cut is made so as to slant, and not be parallel to the base of the loaf, the outline is an *ellipse*, provided the cut goes quite through the sides of the loaf all round, or is in such a direction that it would pass through the sides of the loaf were they extended: but if it goes slanting and parallel to the line of the loaf's side, the outline is a *parabola*; and if you cut in any direction, not through the sides all around, but through the sides and base, and not parallel to the line of the side, being nearer the perpendicular, the outline will be another curve, of which we have not yet spoken, but which is called an *hyperbola*. You will see another instance of it, if you take two plates of glass, and lay them on one another; then put their edge in water, holding them upright and pressing them together; the water, which, to make it more plain, you may colour with a few drops of ink or strong tea, rises to a certain height, and its outline is this curve; which, however much it may seem to differ in form from a circle or ellipse, is found by mathematicians to resemble them very closely in many of its most remarkable properties.

These are the curve lines best known and most frequently discussed; but there are an infinite number of others all related to straight lines and other curve lines by certain fixed rules: for example, the course which any point in the circumference of a circle, as a nail in the felly of a wheel rolling along, takes through the air, is a curve called the *cycloid*, which has many remarka-

ble properties ; and among others, this, that it is, of all lines possible, the one in which any body, not falling perpendicularly, will descend from one point to another the most quickly. Another curve often seen is that in which a rope or chain hangs when supported at both ends : it is called the *catenary*, from the Latin for chain ; and in this form some arches are built. The form of a sail filled with the wind is the same curve.

II. DIFFERENCE BETWEEN MATHEMATICAL AND PHYSICAL TRUTHS.

You perceive, if you reflect a little, that the science which we have been considering, in both its branches, has nothing to do with matter ; that is to say, it does not at all depend upon the properties or even upon the existence of any bodies or substances whatever. The distance of one point or place from another is a straight line ; and whatever is proved to be true respecting this line, as, for instance, its proportion to other lines of the same kind, and its inclination towards them, what we call the *angles* it makes with them, would be equally true, whether there were any thing in those places, at those two points, or not. So, if you find the number of yards in a square field, by measuring one side, 100 yards, and then, multiply that by itself, which makes the whole area 10,000 square yards, this is equally true whatever the field is, whether corn, or grass, or rock, or water ; it is equally true if the solid part, the earth or water, be removed, for then it will be a field of air bounded by four walls or hedges ; but suppose the walls or hedges were removed, and a mark only left at each corner, still it would be true that the space enclosed or bounded by the lines supposed to be drawn between the four marks, was 10,000 square yards in size. But the marks need not be there ; you only want them while measuring one side : if they were gone, it would be equally true that the lines supposed to be drawn from the places where the marks had been, enclose 10,000 square yards of air. But if there were no air, and

consequently a mere void, or empty space, it would be equally true that this space is of the size you had found it to be by measuring the distance of one point from another, of one of the space's corners or angles from another, and then multiplying that distance by itself. In the same way it would be true, that, if the space were circular, its size, compared with another circular space of half its diameter, would be four times larger; of one third its diameter, nine times larger, and of one fourth sixteen times, and so on always in proportion to the squares of the diameters; and that the length of the circumference, the number of feet or yards in the line round the surface, would be twice the length of a circle whose diameter was one half, thrice the circumference of one whose diameter was one third, four times the circumference of one whose diameter was one fourth, and so on, in the simple proportion of the diameters. Therefore, every property which is proved to belong to figures belongs to them without the smallest relation to bodies or matter of any kind although we are accustomed only to see figures in connexion with bodies; but all those properties would be equally true, if no such thing as matter or bodies existed; and the same may be said of the properties of number, the other great branch of the mathematics. When we speak of twice two, and say it makes four, we affirm this without thinking of two horses, or two balls, or two trees; but we assert it concerning two of any thing and every thing equally. Nay, this branch of mathematics may be said to apply still more extensively than even the other; for it has no relation to space, which geometry has; and, therefore, it is applicable to cases where figure and size are wholly out of the question. Thus, you can speak of two dreams, or two ideas, or two minds, and can calculate respecting them just as you would respecting so many bodies; and the properties you find belonging to numbers, will belong to those numbers when applied to things that have no outward or visible or perceivable existence, and cannot even be said to be in any particular place, just as much as the same numbers applied to actual bodies which may be seen and touched.

It is quite otherwise with the science which we are now going to consider, *natural philosophy*. This teaches the nature and properties of actually existing substances, their motions, their connexions with each other, and their influence on one another. It is sometimes also called *physics*, from the Greek word signifying *nature*, though that word is more frequently, in common speech, confined to one particular branch of the science, that which treats of the bodily health.

We have mentioned one distinction between mathematics and natural philosophy, that the former does not depend on the nature and existence of bodies, which the latter entirely does. Another distinction, and one closely connected with this, is, that the truths which mathematics teach us, are *necessarily* such,—they are truths of themselves, and wholly independent of facts and experiments,—they depend only upon reasoning; and it is utterly impossible they should be otherwise than true. This is the case with all the properties which we find belong to numbers and to figures—2 and 2 must of *necessity*, and through all time, and in every place, be equal to 4: those numbers must *necessarily* be always divisible by 3, without leaving any remainder over, which have the sums of the figures they consist of divisible by three; and circles must *necessarily*, and for ever and ever, be to one another, in the exact proportion of the squares of their diameters. It cannot be otherwise; we cannot conceive it in our minds to be otherwise. No man can in his own mind suppose to himself that 2 and 2 should ever be more or less than 4; it would be an utter impossibility—a contradiction in the very ideas: and if stated in words, those words would have no sense. The other properties of number, though not so plain at first sight as this, are proved to be true by reasoning, every one step of which follows from the step immediately before, as a matter of course, and so clear and unavoidably, that it cannot be supposed, or even imagined, to be otherwise; the mind has no means of fancying how it could be otherwise: the final conclusion from all the steps of the reasoning or demonstration, as it is called, follows in the same way from the last of the

steps, and is therefore just as evidently and necessarily true as the first step, which is always something self-evident; for instance, that 2 and 2 make 4, or that the whole is greater than any of its parts, but equal to all its parts put together. It is through this kind of reasoning, step by step, from the most plain and evident things, that we arrive at the knowledge of other things which seem at first not true, or at least not generally true; but when we do arrive at them, we perceive that they are just as true, and for the same reasons, as the first and most obvious matters; that their truth is absolute and necessary, and that it would be as absurd and self-contradictory to suppose they ever could, under any circumstances, be not true, as to suppose that 2 added to 2 could ever make 3, or 5, or 100, or any thing but 4; or, which is the same thing, that 4 should ever be equal to 3, or 5, or 100, or any thing but 4. To find out these reasonings, to pursue them to their consequences, and thereby to discover the truths which are not immediately evident, is what science teaches us: but when the truth is once discovered, it is as certain and plain by the reasoning, as the first truths themselves from which all the reasoning takes its rise, on which it all depends, and which require no proof, because they are self-evident at once, and must be assented to the instant they are understood.

But it is quite different with the truths which natural philosophy teaches. All these depend upon matter of fact; and that is learnt by observation and experiment, and never could be discovered by reasoning at all. If a man were shut up in a room with pen, ink, and paper, he might by thinking discover any of the truths in arithmetic, algebra, or geometry; it is possible at least: there would be nothing absolutely impossible in his discovering all that is now known of these sciences; and if his memory were as good as we are supposing his judgment and conception to be, he might discover it all without pen, ink, and paper, and in a dark room. But we cannot discover a single one of the fundamental properties of matter without observing what goes on around us, and trying experiments upon the nature and

motion of bodies. Thus, the man whom we have supposed shut up, could not possibly find out beyond one or two of the very first properties of matter, and those only in a very few cases; so that he could not tell if these were general properties of all matter or not. He could tell that the objects he touched in the dark were hard and resisted his touch; that they were extended and were solid: that is, that they had three dimensions, length, breadth, and thickness. He might guess that other things existed beside those he felt, and that those other things resembled what he felt in these properties; but he could know nothing for certain, and could not even conjecture much beyond this very limited number of qualities. He must remain utterly ignorant of what really exists in nature, and of what properties matter in general has. These properties, therefore, we learn by experience; they are such as we know bodies to have; they happen to have them—they are so formed by Divine Providence as to have them—but they might have been otherwise formed; the great Author of Nature might have thought fit to make all bodies different in every respect. We see that a stone dropped from our hand falls to the ground: this is a fact which we can only know by experience; before observing it, we could not have guessed it, and it is quite *conceivable* that it should be otherwise: for instance, that when we remove our hand from the body it should stand still in the air; or fly upward, or go forward, or backward, or sideways; there is nothing at all absurd, contradictory, or inconceivable, in any of these suppositions; there is nothing impossible in any of them, as there would be in supposing the stone equal to half of itself, or double of itself; or both falling down or rising upwards at once; or going to the right and the left at one and the same time. Our only reason for not at once thinking it quite conceivable that the stone should stand still in the air, or fly upwards, is, that we have never seen it do so, and have become accustomed to see it do otherwise. But for that, we should at once think it as natural that the stone should fly upwards or stand still, as that it should fall down. But no degree of reflection for any length

of time could accustom us to think 2 and 2 equal to any thing but 4, or to believe the whole of any thing equal to a part of itself.

After we have once, by observation or experiment, ascertained certain things to exist in fact, we may then reason upon them by means of the mathematics ; that is, we may apply mathematics to our experimental philosophy, and then such reasoning becomes absolutely certain, taking the fundamental facts for granted. Thus, if we find that a stone falls in one direction when dropped, and we farther observe the peculiar way in which it falls, that is, quicker and quicker every instant till it reaches the ground, we learn the rule or the proportion by which the quickness goes on increasing ; and we farther find, that if the same stone is pushed forward on a table, it moves in the direction of the push, till it is either stopped by something, or comes to a pause, by rubbing against the table and being hindered by the air. These are facts which we learn by observing and trying, and they might all have been different if matter and motion had been otherwise constituted ; but supposing them to be as they are, and as we find them, we can, by reasoning mathematically from them, find out many most curious and important truths depending upon those facts, and depending upon them not accidentally, but of necessity. For example, we can find in what course the stone will move, if, instead of being dropped to the ground, it is thrown forward ; it will go in the curve already mentioned, the parabola, somewhat altered by the resistance of the air, and it will run through that curve in a peculiar way, so that there will always be a certain proportion between the time it takes and the space it moves through, and the time it would have taken, and the space it would have moved through, had it dropped from the hand in a straight line to the ground. So we can prove, in like manner, what we before stated of the relation between the distance at which it will come to the ground, and the direction it is thrown in ; the distance being greatest of all when the direction is half way between the level or horizontal and the upright or perpendicular. These

are mathematical truths, derived by mathematical reasoning upon physical grounds ; that is, upon matter of fact found to exist by actual observation and experiment. The result, therefore, is necessarily true, and proved to be so by reasoning only, provided we have once ascertained the facts ; but, taken altogether, the result depends partly on the facts learned by experiment or experience, partly on the reasoning from these facts. Thus it is found to be true by reasoning and necessarily true, that *if* the stone falls in a certain way when unsupported, it must, when thrown forward, go in the curve called a parabola, provided there be no air to resist : this is a necessary or mathematical truth, and it cannot possibly be otherwise. But when we state the matter without any supposition, — without any “*if*,” — and say, a stone thrown forward goes in a curve called a parabola, we state a truth, partly fact, and partly drawn from reasoning on the fact ; and it might be otherwise if the nature of things were different. It is called a proposition or truth in Natural Philosophy ; and as it is discovered and proved by mathematical reasoning upon facts in nature, it is sometimes called a proposition or truth in the *Mixed Mathematics*, so named in contradistinction to the *Pure Mathematics*, which are employed in reasoning upon figures and numbers. The man in the dark room could never discover this truth, unless he had been first informed, by those who had observed the fact, in what way the stone falls when unsupported, and moves along the table when pushed. These things he never could have found out by reasoning ; they are facts, and he could only reason from them after learning them by his own experience, or taking them on the credit of other people's experience. But having once so learned them, he could discover by reasoning merely, and with as much certainty as if he lived in daylight, and saw and felt the moving body, that the motion is in a parabola, and governed by certain rules. As experiment and observation are the great sources of our knowledge of Nature, and as the judicious and careful making of experiments is the only way by which her secrets can be known, Natural and Experimental Philosophy mean one

and the same thing ; mathematical reasoning being applied to certain branches of it, particularly those which relate to motion and pressure.

III. NATURAL OR EXPERIMENTAL SCIENCE.

NATURAL PHILOSOPHY, in its most extensive sense, has for its province the investigation of the laws of matter, that is, the properties and the motions of matter ; and it may be divided into two great branches. The first and most important (which is sometimes, on that account, called *Natural Philosophy*, by way of distinction, but more properly *Mechanical Philosophy*) investigates the sensible motions of bodies. The second investigates the constitution and qualities of all bodies, and has various names, according to its different objects. It is called *chemistry*, if it teaches the properties of bodies with respect to heat, mixture with one another, weight, taste, appearance, and so forth : *anatomy* and *Animal Physiology*, (from the Greek word signifying *to speak of the nature* of any thing,) if it teaches the structure and functions of living bodies, especially the human ; for, when it shows those of other animals, we term it *Comparative Anatomy* ; *medicine*, if it teaches the nature of diseases, and the means of preventing them and of restoring health ; *zoology*, (from the Greek word signifying *to speak of animals*,) if it teaches the arrangement or classification and the habits of the different lower animals ; *botany*, (from the Greek word for *herbage*,) including *Vegetable Physiology*, if it teaches the arrangement or classification, the structure and habits of plants ; *mineralogy*, including *geology*, (from the Greek words meaning *to speak of the earth*,) if it teaches the arrangement of minerals, the structure of the masses in which they are found, and of the earth composed of those masses. The term *Natural History* is given to the last three branches taken together, but chiefly as far as they teach the classification of different things, or the observation of the resemblances and differences of the various animals,

plants, and inanimate and ungrowing substances in nature.

But here we may make two general observations. The *first* is, that every such distribution of the sciences is necessarily imperfect; for one runs unavoidably into another. Thus, chemistry shows the qualities of plants with relation to other substances, and to each other; and Botany does not overlook those same qualities, though its chief object be arrangement. So mineralogy, though principally conversant with classifying metals and earth, yet regards also their qualities in respect of heat and mixture. So, too, Zoology, beside arranging animals, describes their structures like Comparative Anatomy. In truth, all arrangement and classifying depends upon noting the things in which the objects agree and differ; and among those things in which animals, plants, and minerals agree or differ, must be considered the anatomical qualities of the one, and the chemical qualities of the other. From hence, in a great measure, follows the *second* observation, namely, that the sciences mutually assist each other. We have seen how arithmetic and algebra aid geometry, and how both the purely Mathematical Sciences aid Mechanical Philosophy. Mechanical Philosophy, in like manner, assists, though, in the present state of our knowledge, not very considerably, both chemistry and anatomy, especially the latter; and chemistry very greatly assists both physiology, medicine, and all the branches of Natural History.

The first great head then, of Natural Science, is Mechanical Philosophy; and it consists of various subdivisions, each forming a science of great importance. The most essential of these, and which is indeed fundamental, and applicable to all the rest, is called *Dynamics*, from the Greek word signifying *power* or *force*, and it teaches the laws of motion in all its varieties. The case of the stone thrown forward, which we have already mentioned more than once, is an example. Another, of a more general nature, but more difficult to trace, far more important in its consequences, and of which, indeed, the former is only one particular case, relates to the motions of all bodies, which are attracted (or influenced, or

drawn) by any power towards a certain point, while they are, at the same time, driven forward, by some push given to them at first, and forcing them onwards. at the same time that they are drawn towards the point. The line in which a body moves while so drawn and so driven, depends upon the force it is pushed with, the direction it is pushed in, and the kind of power that draws it towards the point; but, at present, we are chiefly to regard the latter circumstance, the attraction towards the point. If this attraction be uniform, that is, the same at all distances from the point, the body will move in a circle, if one direction be given to the forward push. The case with which we are best acquainted is when the force decreases as the squares of the distances, from the centre or point of attraction, increase; that is, when the force is four times less at twice the distance, nine times less at thrice the distance, sixteen times less at four times the distance, and so on. A force of this kind acting on the body, will make it move in an oval, a parabola, or an hyperbola, according to the amount or direction of the impulse, or forward push, originally given: and there is one proportion of that force, which, if directed perpendicularly to the line in which the central force draws the body, will make it move round in a circle, as if it were a stone tied to a string and whirled round the hand. The most usual proportions in nature, are those which determine bodies to move in an oval or ellipse, the curve described by means of a cord fixed at both ends, in the way already explained. In this case, the point of attraction, the point towards which the body is drawn, will be nearer one end of the ellipse than the other, and the time the body will take to go round, compared with the time any other body would take, moving at a different distance from the same point of attraction, but drawn towards that point with a force which bears the same proportion to the distance, will bear a certain proportion, discovered by mathematicians, to the average distances of the two bodies from the point of common attraction. If you multiply the numbers expressing the times of going round, each by itself, the products will be to one another in the proportion of the average distances

multiplied each by itself, and that product again by the distance. Thus, if one body take two hours, and is five yards distant, the other, being ten yards off, will take something less than five hours and forty minutes.*

Now, this is one of the most important truths in the whole compass of science, for it does so happen, that the force with which bodies fall towards the earth, or what is called their *gravity*, the power that draws or attracts them towards the earth, varies with the distance from the earth's centre, exactly in the proportion of the squares, lessening as the distance increases; at two diameters from the earth's centre, it is four times less than at one; at three diameters, nine times less; and so forth. It goes on lessening, but never is destroyed, even at the greatest distances to which we can reach by our observations, and there can be no doubt of its extending indefinitely beyond. But by astronomical observations, made upon the motion of the heavenly bodies, upon that of the moon for instance, it is proved that her movement is slower and quicker at different parts of her course, in the same manner as a body's motion on the earth would be slower and quicker, according to its distance from the point it was drawn towards, provided it was drawn by a force acting in the proportion to the squares of the distance, which we have frequently mentioned; and the proportion of the time to the distance is also observed to agree with the rule above referred to. Therefore, she is shown to be attracted towards the earth by a force that varies according to the same proportion in which gravity varies; and she must consequently move in an ellipse round the earth, which is placed in a point nearer the one end than the other of that curve. In like manner, it is shown that the earth moves round the sun in the same curve line, and is drawn towards the sun by a similar force; and that all the other planets in their courses, at various distances, follow the same rule, moving in ellipses, and drawn towards the

* This is expressed mathematically by saying, that the squares of the times are as the cubes of the distances. Mathematical language is not only the simplest and most easily understood of any, but the shortest also.

sun by the same kind of power. Three of them have moons like the earth, only more numerous, for Jupiter has four, Saturn seven, and Herschel six, so very distant that we cannot see them without the help of glasses; but all those moons, move round their principal planets, as ours does round the earth, in ovals or ellipses; while the planets, with their moons, move in their ovals round the sun, like our own earth with its moon.

But this power, which draws them all towards the sun, and regulates their path and their motion round him, and which draws the moons towards the principal planets, and regulates their motion and path round those planets, is the same with the gravity by which bodies fall towards the earth, being attracted by it. Therefore, the whole of the heavenly bodies are kept in their places, and wheel round the sun, by the same influence or power that makes a stone fall to the ground.

It is usual to call the sun, and the planets which with their moons move round him, (eleven in number, including the four lately discovered and the one discovered by Herschel,) the *Solar System*; because they are a class of the heavenly bodies far apart from the innumerable fixed stars, and so near each other, as to exert a perceptible influence on one another, and thus to be connected together.

The *comets* belong to the same system, according to this manner of viewing the subject. They are bodies which move in elliptical paths, but far longer and narrower than the curves in which the earth and the other planets and their moons roll. Our curves are not much less round than circles; the paths of the comets are long and narrow, so as, in many places, to be more nearly straight lines than circles. They differ from the planets and their moons in another respect; they do not depend on the sun for the light they give, as our moon plainly does, being dark when the earth comes between her and the sun; and as the other planets do, those of them that are nearer the sun than we are, being dark when they come between us and him, appearing to pass across his surface. But the comets give light always of them-

selves, being apparently vast bodies heated red-hot by coming in their course far nearer the sun than the nearest of the planets ever do. Their motion, when near the sun, is much more rapid than that of the planets; they both approach him much nearer, retreat from him to much greater distances, and take much longer time in going round him than any of the planets do. Yet even these comets are subject to the same great law of gravitation, which regulates the motions of the planets. Their year, the time they take to revolve, is in some cases 75, in others 135, in others 300 of our years; their distance is a hundred times our distance when farthest off, and not a hundred and sixtieth of our distance when nearest the sun; their swiftest motion is above twelve times swifter than ours, although ours is a hundred and forty times swifter than a cannon ball; yet their path is a curve of the same kind with ours, though longer and flatter, differing in its formation only as one oval differs from another by the string you draw it with, having the ends fixed at two points more distant from each other: consequently the sun, being in one of those points, is much nearer the end of the path the comet moves in, than he is near the end of our path. Their motion, too, follows the same rule, being swifter the nearer the sun: the attraction of the sun for them varies according to the square of the distances, being four times less at twice the distance, nine times less at thrice, and so on; and the proportion between the times of revolving and the distances is exactly the same, in the case of those remote bodies, as in that of the moon and the earth. One law prevails over all, and regulates their motions as well as our own; it is the gravity of the comets towards the sun, and they, like our own earth and moon, wheel round him in boundless space, drawn by the same force, acting by the same rule, which makes a stone fall when dropped from the hand.

The more full and accurate our observations are upon those heavenly bodies, the better we find all their motions agreeing with this great doctrine; although, no doubt, many things are to be taken into the account beside the force that draws them to the different

centres. Thus, while the moon is drawn by the earth, and the earth by the sun, the moon is also drawn directly by the sun; and while Jupiter is drawn by the sun, so are his moons; and both Jupiter and his moons are drawn by Saturn: nay, as this power of gravitation is quite universal, and so no body can attract or draw another without being itself drawn by that other, the earth is drawn by the moon, while the moon is drawn by the earth; and the sun is attracted by the planets which he draws towards himself. These mutual attractions give rise to many deviations from the simple line of the ellipse, and produce many irregularities in the simple calculation of the times and motions of the bodies that compose the system of the universe. But the extraordinary powers of investigation applied to the subject by the modern improvements in mathematics, have enabled us at length to reduce even the greatest of the irregularities to order and system; and to unfold one of the most wonderful truths in all science, namely, that by certain necessary consequences of the simple fact upon which the whole fabric rests—the proportion of the attractive forces to the distances at which it operates—all the irregularities which at first seemed to disturb the order of the system, and to make the appearances depart from the doctrine, are themselves subject to a certain fixed rule, and can never go beyond a particular point, but must begin to lessen when they have slowly reached that point, and must then lessen until they reach another point, when they begin again to increase; and so on forever. Nay, so perfect is the arrangement of the whole system, and so accurately does it depend upon mathematical principles, that irregularities, or rather apparent deviations, have been discovered by mathematical reasoning before astronomers had observed them, and then their existence has been ascertained by observation, and found to agree precisely with the results of calculation.* Thus, the

* The application of Mathematics to Chemistry, has already produced a great change in that science, and is calculated to produce still greater improvements. It may be almost certainly reckoned upon as the source of new discoveries, made by induction after the mathemati-

planets move in ovals, from gravity, the power that attracts them towards the sun, combined with the original impulse they received forwards; and the disturbing forces are continually varying the course of the curves or ovals, making them bulge out in the middle, as it were, on the sides, though in a very small proportion to the whole length of the ellipse. The oval thus bulging, its breadth increases by a very small quantity yearly and daily; and after a certain large number of years, the bulging becomes as great as it ever can be: then the alteration takes a contrary direction, and the curve gradually flattens as it had bulged; till, in the same number of years which it took to bulge, it becomes as flat as it ever can be, and then it begins to bulge again, and so on forever.

And so, too, of every other disturbance and irregularity in the system: what at first appears to be some departure from the rule, when more fully examined, turns out to be only a consequence of it, or the result of a more general arrangement springing from the principle of gravitation; an arrangement of which the rule itself, and the apparent or supposed exception, both form parts.

The power of gravitation, which thus regulates the whole system of the universe, is found to rule each member or branch of it separately. Thus, it is demonstrated that the tides of the ocean are caused by the gravitation which attracts the water towards the sun and moon; and the figure both of our earth and of such of the other bodies as have a spinning motion round their axis, is determined by gravitation combined with that motion: they are all flattened towards the ends of the axis they spin upon, and bulge out towards the middle.

cal reasoning has given the suggestion. The learned reader will perceive that we allude to the beautiful doctrine of *Definite* or *Multiple Proportions*. To take an example; the probability of an oxide of arsenic being discovered is impressed upon us, by the composition of arsenious and arsenic acids, in which the oxygen is as 2 to 3; and therefore we may expect to find a compound of the same base, with the oxygen as unity. The extraordinary action of chlorine and its compounds on light leads us to expect some farther discovery respecting its composition, perhaps respecting the matter of light.

The great discoverer of the principle on which all these truths rest, Sir Isaac Newton, certainly by far the most extraordinary man that ever lived, concluded, by reasoning upon the nature of motion and matter, that this flattening must take place in our globe: every one before his time had believed the earth to be a perfect sphere or globe, chiefly from observing the round shadow which it casts on the moon in eclipses; and it was many years after his death that the accuracy of his opinion was proved by measurements on the earth's surface, and by the different weight and attraction of bodies at the equator, where it bulges, and at the poles, where it is flattened. The improvement of telescopes has enabled us to ascertain the same fact with respect to the planets Jupiter and Saturn.

Beside unfolding the general laws which regulate the motions and figures of the heavenly bodies forming our solar system, astronomy consists in calculations of the places, times, and eclipses of those bodies, and their moons or *satellites*, (from a Latin word signifying an *attendant*.) and in observations of the fixed stars, which are innumerable assemblages of bodies, not moving round the sun as our earth and the other planets do, nor receiving the light they shine with from his light: but shining as the sun and the comets do, with a light of their own, and placed, to all appearances, immoveable, at immense distances from our world, that is, from our solar system. Each of them is probably the sun of some other system like our own, composed of planets and their moons or satellites; but so extremely distant from us, that they all are seen by us like one point of faint light, as you see two lamps, placed a few inches asunder, only like one, when you view them a great way off. The number of the fixed stars is prodigious: even to the naked eye they are very numerous, about 3000 being thus visible; but when the heavens are viewed through the telescope, stars become visible in numbers wholly incalculable: 2000 are discovered in one of the small collections of a few visible stars called *constellations*; nay, what appears to the naked eye only a light cloud, as the *milky way*, when viewed through the tele-

scope, proves to be an assemblage of innumerable fixed stars, each of them, in all likelihood a sun and a system like the rest, though at an immeasurable distance from ours.

The size, and motions, and distances, of the heavenly bodies, are such as to exceed the power of ordinary imagination, from any comparison with the smaller things we see around us. The earth's diameter is nearly 8000 miles in length; but the sun's is above 880,000 miles, and the bulk of the sun is above 1,300,000 times greater than that of the earth. The planet Jupiter, which looks like a mere speck, from his vast distance, is nearly 1300 times larger than the earth. Our distance from the sun is above 95 millions of miles; but Jupiter is 490 millions, and Saturn 900 millions of miles distant from the sun. The rate at which the earth moves round the sun is 68,000 miles an hour, or 140 times swifter than the motion of a cannon-ball; and the planet Mercury, the nearest to the sun, moves still quicker, nearly 110,000 miles an hour. We, upon the earth's surface, beside being carried round the sun, move round the earth's axis by the rotatory or spinning motion which it has; so that every 24 hours we move in this manner near 14,000 miles, beside moving round the sun above 1,600,000 miles. These motions and distances, however, prodigious as they are, seem as nothing compared to those of the comets, one of which, when farthest from the sun, is 11,200 millions of miles from him; and when nearest the sun, flies at the amazing rate of 880,000 miles an hour. Sir Isaac Newton calculated its heat at 2000 times that of red-hot iron; and that it would take thousands of years to cool. But the distance of the fixed stars is yet more vast: they have been supposed to be 400,000 times farther from us than we are from the sun, that is, 38 millions of millions of miles; so that a cannon-ball would take near nine millions of years to reach one of them, supposing there was nothing to hinder it from pursuing its course thither. As light takes about eight minutes and a quarter to reach us from the sun, it would be above six years in coming from one of those stars; but the calculations of

later astronomers prove some stars to be so far distant, that their light must take centuries before it can reach us; so that every particle of light which enters our eyes left the star it comes from three or four hundred years ago.

Astronomers have, by means of their excellent glasses, aided by geometry and calculation, been able to observe not only stars, planets, and their satellites, invisible to the naked eye, but to measure the height of mountains in the moon, by observations of the shadows which those eminences cast on her surface; and they have discovered volcanoes, or burning mountains, in the same body.

The tables, which they have by the like means been enabled to form of the heavenly motions, are of great use in navigation. By means of the eclipses of Jupiter's satellites, and by the tables of the moon's motions, we can ascertain the position of a ship at sea; for the observation of the sun's height at mid-day gives the *latitude* of the place, that is, its distance from the equinoctial or equator, the line passing through the middle of the earth's surface, equally distant from both poles; and these tables, with the observations of the satellites, or moons, give the distance east and west of the observatory for which the tables are calculated—called the *longitude* of the place: consequently, the mariner can thus tell nearly in what part of the ocean he is, how far he has sailed from his port of departure, and how far he must sail, and in what direction, to gain the port of his destination. The advantage of this knowledge is, therefore, manifest in the common affairs of life; but it sinks into insignificance, compared with the vast extent of those views which the contemplations of the science afford, of numberless worlds filling the immensity of space, and all kept in their places, and adjusted in their prodigious motions, by the same simple principle, under the guidance of an all-wise and all-powerful Creator.

We have been considering the application of dynamics to the motions of the heavenly bodies, which forms the science of *physical astronomy*. The application of dynamics to the calculation, production, and direction,

of motion, forms the science of *mechanics*, sometimes called *practical mechanics*, to distinguish it from the more general use of the word, which comprehends every thing that relates to motion and force. The fundamental principle of the science, upon which it mainly depends, flows immediately from a property of the circle already mentioned, and which, perhaps, appeared at the moment of little value—that the lengths of circles are in proportion to their diameters. Observe how upon this simple truth nearly the whole of those contrivances are built by which the power of man is increased, as far as solid matter assists him in extending it; and nearly the whole of those doctrines, too, by which he is enabled to explain the voluntary motions of animals, as far as these depend upon their own bodies. There can be nothing more instructive in showing the importance and fruitfulness of scientific truths, however trivial and forbidding they may at first sight appear. For it is an immediate consequence of this property of the circle, that if a rod of iron, or beam of wood, or any other solid material, be placed on a point, or pivot, so that it may move as the arms of a balance do round its centre, or a see-saw board does round its prop, the two ends will go through parts of circles, each proportioned to that arm of the beam to which it belongs; the two circles will be equal if the pivot is in the centre or middle point of the beam; but if it is nearer one end than the other, say three times, that end will go through a circular space, or arch, three times shorter than the circular space the other end goes through in the same time. If, then, the end of the long beam goes through three times the space, it must move with three times the swiftness of the short beam's end, since both move in the same time; and, therefore, any force applied to the long end must overcome the resistance of three times that force applied at the opposite end, since the two ends move in contrary directions: hence, one pound placed at the long end would balance three placed at the short end. The beam we have been supposing is called a *lever*, and the same rule must evidently hold for all proportions of the lengths of its arms. If, then,

the lever be seventeen feet long, and the pivot, or *fulcrum*, (as it is called, from a Latin word, signifying *support*;) be a foot from one end, an ounce placed on the other end will balance a pound placed on the near end; and the least additional weight, or the slightest push or pressure on the far end, so loaded, will make the pound weight on the other move upwards. If, instead of an ounce, we place upon the end of the long arm the short arm of a second beam or lever supported by a fulcrum, one foot from it, and then place the long arm of this second lever upon the short arm of a third lever, whose fulcrum is one foot from it; and if we put on the end of this third lever's long arm an ounce weight, that ounce will move upwards a pound on the second lever's long arm, and this moving upwards will cause the short arm to force downwards sixteen pounds at the long end of the first lever, which will make the short end of the first lever move upwards, though two hundred and fifty-six pounds be laid on it: the same thing continuing, a pound on the long arm of the third lever will move a ton and three quarters on the short arm of the first lever; that is, will balance it, so that the slightest pressure with the finger, or a touch from a child's hand, will move as much as two horses can draw. The lever is called, on this account, a *mechanical power*; and there are five other mechanical powers, of most of which its properties form the foundation; indeed, they have all been resolved into combinations of levers. The pulley seems the most difficult to reduce under the principle of the lever. Thus, the *wheel and axle* is only a lever moving round an axle, and always retaining the effect gained during every part of the motion, by means of a rope wound round the butt end of the axle; the spoke of the wheel being the long arm of the lever, and the half diameter of the axle its short arm. By a combination of levers, wheels, pulleys, so great an increase of force is obtained, that, but for the obstruction from friction, and the resistance of the air, there could be no bounds to the effect of the smallest force thus multiplied; and to this fundamental principle, Archimedes, one of the most illustrious mathematicians of ancient times, re-

ferred, when he boasted, that if he only had a pivot or fulcrum whereon he might rest his machinery, he could move the earth. Upon so simple a truth, assisted by the aid derived from other sources, rests the whole fabric of mechanical power, whether for raising weights, or cleaving rocks, or pumping up rivers from the bowels of the earth; or, in short, performing any of those works, to which human strength, even augmented by the help of the animals whom Providence has subdued to our use, would prove altogether inadequate.

The application of dynamics to the pressure and motions of fluids, constitutes a science which receives different appellations according as the fluids are heavy and liquid like water, or light and invisible, like air. In the former case it is called *hydrodynamics*, from the Greek words signifying *water* and *power*, or *force*; in the latter *pneumatics*, from the Greek words signifying *breath* or *air*; and hydrodynamics is divided into *hydrostatics*, which treats of the weight and pressure of liquids, from the Greek words for *balancing of water*; and *hydraulics*, which treats of their motion, from the Greek name for certain musical instruments played with *water* in *pipes*.

The discoveries to which experiments upon the pressure and motion of fluids, aided by mechanical reasoning, have led, are of the greatest importance, whether we regard their application to practical purposes, or their use for explaining the appearances in nature, or their singularity as the subjects of scientific contemplation. When it is found that the pressure of water or any other liquid upon the surface that contains it, is not in the least degree proportioned to its bulk, but only to the height at which it stands, so that a long small pipe, containing a pound or two of the fluid, will give the pressure of twenty or thirty tons; nay, of twice or thrice as much, if its length be increased, and its bore lessened, without the least regard to the quantity of the liquid, we are not only astonished at so extraordinary and unexpected a property of matter, but we straightway perceive one of the great agents employed in the vast operations of nature, in which the most trifling means are

used to work the mightiest effects. We likewise learn to guard against many serious mischiefs in our own works, and to apply safely and usefully a power calculated, according as it is directed, either to produce unbounded devastation, or to render the most beneficial service.

Nor are the discoveries relating to the air less interesting in themselves, and less applicable to important uses. It is an agent, though invisible, as powerful as water, in the operations both of nature and of art. Experiments of a simple and decisive nature show the amount of its pressure to be 14 or 15 pounds on every square inch; but, like all other fluids, it presses equally in every direction; so that though, on one hand, there is a pressure downwards of above 250 pounds, yet this is exactly balanced by an equal pressure upwards, from the air pressing round and getting below. If, however, the air on one side be removed, the whole pressure from the other acts unbalanced. Hence, the ascent of water in pumps, which suck out the air from a barrel, and allow the pressure upon the water to force it up 32 or 33 feet, that body of water being equal to the weight of the atmosphere. Hence the ascent of the mercury in the barometer is only 28 or 29 inches, mercury being 13 or 14 times heavier than water. Hence, too, the motion of the steam-engine; the piston of which, until the direct force of steam was applied, used to be pressed downwards by the weight of the atmosphere from above, all air being removed below it by first filling it with steam, and then suddenly cooling and converting the steam into water, so as to leave nothing in the space it had occupied. Hence, too, the power which some animals possess of walking along the perpendicular surfaces of walls, and even the ceilings of rooms, by squeezing out the air between the inside of their feet and the wall, and thus being supported by the pressure of the air against the outside of their feet.

The science of *optics*, (from the Greek word for *seeing*,) which teaches the nature of light, and of the sensation conveyed by it, presents, of itself, a field of unbounded extent and interest. To it the arts, and the

other sciences, owe those most useful instruments which have enabled us at once to examine the minutest parts of the structure of animal and vegetable bodies, and to calculate the size and the motions of the most remote of the heavenly bodies. But as an object of learned curiosity, nothing can be more singular than the fundamental truth discovered by the genius of Newton—that the light, which we call white, is in fact composed of all the colours, blended in certain proportions; unless, perhaps, it be that astonishing conjecture of his unrivalled sagacity, by which he described the inflammable nature of the diamond, and its belonging, against all appearance of probability, to the class of oily substances, from having observed, that it stood among them, and far removed from all crystals, in the degree of its action upon light; a conjecture turned into certainty by discoveries made a century afterwards.

To a man who, for original genius and strong natural sense, is not unworthy of being named after this illustrious sage, we owe the greater part of *electrical* science. It treats of the peculiar substance, resembling both light and heat, which, by rubbing, is found to be produced in a certain class of bodies, as glass, wax, silk, amber; and to be conveyed easily or *conducted* through others, as wood, metals, water; and it has received the name of *electricity*, from the Greek word for *amber*. Dr. Franklin discovered that this is the same matter which, when collected in the clouds, and conveyed from them to the earth, we call *lightning*, and whose noise, in darting through the air, is *thunder*. The observation of some movements in the limbs of a dead frog gave rise to the discovery of *animal electricity*, or *Galvanism*, as it was at first called from the name of the discoverer; and which has of late years given birth to improvements that have changed the face of chemical philosophy; affording a new proof how few there are of the processes of nature incapable of repaying the labour we bestow in patiently and diligently examining them. It is to the results in the remark accidentally made upon the twitching of the frog's leg, not, however, hastily dismissed and forgotten, but treasured

up and pursued through many an elaborate experiment and calculation, that we owe our acquaintance with the extraordinary metal, liquid like mercury, lighter than water, and more inflammable than phosphorus, which forms, when it burns by mere exposure to the air, one of the salts best known in commerce, and the principal ingredient in saltpetre.

In order to explain the nature and objects of those branches of natural science, more or less connected with the mathematics, some details were necessary, as without them it was difficult immediately to perceive their importance, and, as it were, relish the kind of instruction which they afford. But the same course need not be pursued with respect to the other branches. The value and the interest of chemistry is at once perceived, when it is known to teach the nature of all bodies; the relations of simple substances to heat and to one another, or their combinations together; the composition of those which nature produces in a compound state; and the application of the whole to the arts and manufactures. Some branches of philosophy, again, are chiefly useful and interesting to particular classes, as surgeons and physicians. Others are easily understood by a knowledge of the principles of mechanics and chemistry, of which they are applications and examples; as those which teach the structure of the earth and the changes it has undergone; the motions of the muscles, and the structure of the parts of animals; the qualities of animal and vegetable substances; and that department of agriculture which treats of soils, manure, and machinery. Other branches are only collections of facts, highly curious and useful indeed, but which any one who reads or listens, perceives as clearly and comprehends as readily as the professed student. To this class belongs natural history, in so far as it describes the habits of animals and plants, and its application to that department of agriculture which treats of cattle and their management.

IV. APPLICATION OF NATURAL SCIENCE TO THE ANIMAL AND VEGETABLE WORLD.

But, for the purpose of farther illustrating the advantages of philosophy, its tendency to enlarge the mind, as well as to interest it agreeably, and afford pure and solid gratification, a few instances may be given of the singular truths brought to light by the application of mathematical, mechanical, and chemical knowledge to the habits of animals and plants; and some examples may be added of the more ordinary and easy, but scarcely less interesting observations, made upon those habits, without the aid of the profounder sciences.

We may remember the curve line which mathematicians call a cycloid. It is the path which any point of a circle, moving along a plane, and round its centre, traces in the air; so that the nail on the felley of a cart wheel moves in a cycloid, as the cart goes along, and as the wheel itself both turns round its axle, and is carried along the ground. Now this curve has certain properties of a peculiar and very singular kind with respect to motion. One is, that if any body whatever moves in a cycloid by its own weight or swing, together with some other force acting upon it all the while, it will go through all distances of the same curve in exactly the same time; and, accordingly, pendulums have sometimes been contrived to swing in such a manner, that they shall describe cycloids, or curves very near cycloids, and thus move in equal times, whether they go through a long or a short part of the same curve. Again, if a body is to descend from any one point to any other, not in the perpendicular, by means of some force acting on it together with its weight, the line in which it will go the quickest of all will be the cycloid; not the straight line, though that is the shortest of all lines which can be drawn between the two points; nor any other curve whatever, though many are much flatter, and therefore shorter than the cycloid—but the cycloid, which is longer than any of them, is yet, of all curved or straight lines which can be drawn, the one

the body will move through in the shortest time. Suppose, again, that the body is to move from one point to another, by its weight and some other force acting together, but to go through a certain space—as a hundred yards—the way it must take to do this, in the shortest time possible, is by moving in a cycloid; or the length of a hundred yards must be drawn into a cycloid, and then the body will descend through the hundred yards in a shorter time than it could go the same distance in any other path whatever. Now it is believed that birds, as the eagle, which build in the rocks, drop or fly down from height to height in this course. It is impossible to make very accurate observations of their flight and path; but there is a general resemblance between the course they take and the cycloid, which has led ingenious men to adopt this opinion.

If we have a certain quantity of any substance, a pound of wood, for example, and would fashion it in the shape to take the least room, we must make a globe of it; it will in this figure have the smallest surface. But suppose we want to form the pound of wood, so that in moving through the air or water it shall meet with the least possible resistance; then we must lengthen it out forever, till it becomes not only like a long-pointed pin, but thinner and thinner, longer and longer, till it is quite a straight line, and has no perceptible breadth or thickness at all. If we would dispose of the given quantity of matter, so that it shall have a certain length only, say a foot, and a certain breadth at the thickest part, say three inches, and move through the air or water with the smallest possible resistance which a body of those dimensions can meet, then we must form it into a figure of a peculiar kind, called the *solid of least resistance*, because of all the shapes that can be given to the body, its length and breadth remaining the same, this is the one which will make it move with the least resistance through the air or water, or other fluid. A very difficult chain of mathematical reasoning, by means of the highest branches of algebra, leads to a knowledge of the curve, which by revolving on its axis, makes a solid of this shape, in the same way that a circle, by so revolving, makes a sphere or globe; and the curve cer-

tainly resembles closely the face or head part of a fish. Nature, therefore, (by which we always mean the Divine Author of nature,) has fashioned these fishes so, that, according to mathematical principles, they swim the most easily through the element they live and move in.*

Suppose upon the face part of one of these fishes a small insect were bred, endowed with faculties sufficient to reason upon its condition, and upon the motion of the fish it belonged to, but never to have discovered the whole size and shape of the face part; it would certainly complain of the form as clumsy, and fancy that it could have made the fish so as to move with less resistance. Yet if the whole shape were disclosed to it, and it could discover the principle on which that shape was preferred, it would at once perceive, not only that what had seemed clumsy was skilfully contrived, but that, if any other shape whatever had been taken, there would have been an error committed; nay, *that there must of necessity* have been an error; and that the very best possible arrangement had been adopted. So it may be with man in the universe, where, seeing only a part of the great system, he fancies there is evil; and yet, if he were permitted to survey the whole, what had seemed imperfect might appear to be necessary for the general perfection, insomuch that any other arrangement, even of that seemingly imperfect part, must needs have rendered the whole less perfect. The common objection is, that what seems evil *might have* been avoided; but in the case of the fish's shape, it *could not* have been avoided.

It is found by optical inquiries, that the particles or rays of light, in passing through transparent substances of a certain form, are bent to a point where they make an image or picture of the shining bodies they come from, or of the dark bodies they are reflected from. Thus, if a pair of spectacles be held between a candle and the wall, they make two images of the candle upon

* The feathers of the wings of birds are found to be placed at the best possible angle for helping on the bird by their action on the air.

it; and if they be held between the window and a sheet of paper when the sun is shining, they make a picture on the paper of the houses, trees, fields, sky, and clouds. The eye is found to be composed of several natural magnifiers, which make a picture on a membrane at the back of it, and from this membrane there goes a nerve to the brain, conveying the impression of the picture, by means of which we see. Now, white light was discovered by Newton to consist of differently-coloured parts, which are differently bent in passing through transparent substances, so that the lights of several colours come to a point at different distances, and thus create an indistinct image at any one distance. This was long found to make our telescopes imperfect, insomuch that it became necessary to make them of reflectors or mirrors, and not of magnifying glasses, the same difference not being observed to affect the reflection of light. But another discovery was, about fifty years afterwards, made by Mr. Dolland—that, by combining different kinds of glass in a compound magnifier, the difference may be greatly corrected; and on this principle he constructed his telescopes. It is found, too, that the different natural magnifiers of the eye are combined upon a principle of the same kind. Thirty years later, a third discovery was made by Mr. Blair, of the greatly superior effect which combinations of different liquids have in correcting the imperfection; and, most wonderful to think, when the eye is examined, we find it consists of different liquids, acting naturally upon the same principle which was thus recently found out in optics by many ingenious mechanical and chemical experiments.

Again, the point to which any magnifier collects the light is more or less distant as the magnifier is flatter or rounder, so that a small globe of glass or any transparent substance makes a microscope. And this property of light depends upon the nature of lines, and is purely of a mathematical nature, after we have once ascertained by experiment, that light is bent in a certain way when it passes through transparent bodies. Now, birds flying in the air, and meeting with many obstacles, as branches and leaves of trees, require to have their eyes

sometimes as flat as possible for protection ; but sometimes as round as possible, that they may see the small objects, flies and other insects, which they are chasing through the air, and which they pursue with the most unerring certainty. This could only be accomplished by giving them a power of suddenly changing the form of their eyes. Accordingly there is a set of hard scales placed on the outer coat of their eye, round the place where the light enters ; and over these scales are drawn the muscles or fibres by which motion is communicated ; so that by acting with these muscles, the bird can press the scales, and squeeze the natural magnifier of the eye into a round shape, when it wishes to follow an insect through the air, and can relax the scales in order to flatten the eye again when it would see a distant object, or move safely through leaves and twigs. This power of altering the shape of the eye is possessed by birds of prey in a very remarkable degree. They can thus see the smallest objects close to them, and can yet discern larger bodies at vast distances, as a carcass stretched upon the plain, or a dying fish afloat on the water.

A singular provision is made for keeping the surface of the bird's eye clean—for wiping the glass of the instrument, as it were—and also for protecting it, while rapidly flying through the air and through thickets, without hindering the sight. Birds are, for these purposes, furnished with a third eyelid, a fine membrane or skin, which is constantly moved very rapidly over the eyeball by two muscles placed in the back of the eye. One of the muscles ends in a loop the other in a string which goes through the loop, and is fixed in the corner of the membrane, to pull it backward and forward. If you wish to draw a thing towards any place with the least force, you must pull directly in the line between the thing and the place ; but if you wish to draw it as quickly as possible, and with the most convenience, and do not regard the loss of force, you must pull it obliquely, by drawing it in two directions at once. Tie a string to a stone, and draw it straight towards you with one hand ; then, make a loop on another string, and running the first through it, draw one string in each hand,

not towards you, but sideways, till both strings are stretched in a straight line: you will see how much more easily the stone moves quickly than it did before when pulled straight forward. Again, if you tie strings to the two ends of a rod, or slip of card, in a running groove, and bring them to meet and pass through a ring or hole, for every inch in a straight line that you draw both together below the ring, the rod will move onward two. Now this is proved, by mathematical reasoning, to be the necessary consequence of forces applied obliquely: there is a loss of power, but a great gain in velocity and convenience. This is the thing required to be gained in the third cyclid, and the contrivance is exactly that of a string and a loop, moved each by a muscle, as the two strings are by the hands in the cases we have been supposing.

A third cyclid of the same kind is found in the horse, and called the *haw*; it is moistened with a pulpy substance (or mucilage) to take hold of the dust on the eyeball, and wipe it clear off; so that the eye is hardly ever seen with any thing upon it, though greatly exposed from its size and posture. The swift motion of the haw is given to it by a gristly elastic substance, placed between the eyeball and the socket, and striking obliquely, so as to drive out the haw with great velocity over the eye, and then let it come back as quickly. Ignorant persons, when this haw is inflamed from cold, and swells so as to appear, which it never does in a healthy state, often mistake it for an imperfection, and cut it off: so nearly do ignorance and cruelty produce the same mischief.

If any quantity of matter, as a pound of wood or iron, is fashioned into a rod of a certain length, say one foot, the rod will be strong in proportion to its thickness; and, if the figure is the same, that thickness can only be increased by making it hollow. Therefore, hollow rods or tubes, of the same length and quantity of matter, have more strength than solid ones. This is a principle so well understood now, that engineers make their axles and other parts of machinery hollow, and therefore stronger with the same weight, than they would be if shinner and solid. Now the bones of animals are all

more or less hollow ; and are therefore stronger with the same weight and quantity of matter than they otherwise would be. But birds have the largest bones in proportion to their weight ; their bones are more hollow than those of animals which do not fly ; and therefore they have the needful strength without having to carry more weight than is absolutely necessary. Their quills derive strength from the same construction. They possess another peculiarity to help their flight. No other animals have any communication between the air-vessels of their lungs and the hollow parts of their bodies ; but birds have it ; and by this means they can blow out their bodies as we do a bladder, and thus become lighter when they would either make their flight towards the ground slower, or rise more swiftly, or float more easily in the air ; while, by lessening their bulk and closing their wings, they can drop more speedily if they wish to chase, or to escape. Fishes possess a power of the same kind, though not by the same means. They have *air-bladders* in their bodies, and can puff them out, or press them closer, at pleasure : when they want to rise in the water, they fill out the bladder, and this lightens them ; when they would sink, they squeeze the bladder, pressing the air into a smaller space, and this makes them heavier. If the bladder breaks, the fish remains at the bottom, and can be held up only by the most laborious exertions of the fins and tail. Accordingly, flat fish, as skaits and flounders, which have no air-bladders, seldom rise from the bottom, but are found lying on banks in the sea, or at the bottom of rivers.

If you have a certain space, as a room, to fill up with closets or little cells, all of the same size and shape, there are only three figures which will answer, and enable you to fill the room without losing any space between the cells ; they must either be squares, or figures of three equal sides, or figures of six equal sides. With any other figures whatever, space would be lost between the cells. This is evident upon considering the matter ; and it is proved by mathematical reasoning. The six-sided figure is by far the most convenient of those three shapes, because its corners are flatter, and any round

body placed in it has therefore more space, less room being lost in the corners. This figure, too, is the strongest of the three; any pressure from without or from within will hurt it least, as it has something of the strength of an arch. A round figure would be still stronger, but then room would be lost between the circles, whereas, with the six-sided figure none is lost. Now, it is a most remarkable fact, that *bees* build their cells exactly in this shape, and thereby save both room and materials beyond what they could save if they built in any other shape whatever. They build in the very best possible shape for their purpose, which is to save all the room and all the wax they can. So far as to the shape of the walls of each cell; but the roof and floor, or top and bottom, are built on equally true principles. It is proved by mathematicians, that, to give the greatest strength, and save the most room, the roof and floor must be made of three square planes meeting in a point; and they have farther proved, by a demonstration belonging to the highest parts of Algebra, that there is one particular angle or inclination of those planes to each other where they meet, which makes a greater saving of materials and of work than any other inclination whatever could possibly do. Now, the bees actually make the tops and bottoms of their cells of three planes meeting in a point; and the inclinations or angles at which they meet are precisely those found out by the mathematician to be the best possible for saving wax and work.* Who would dream of the bee knowing the highest branch of the mathematics—the fruit of Newton's most wonderful discovery—a result, too, of which he was himself ignorant, one of his most celebrated followers having found it out in a later age?

* Koenig, pupil of Bernouilli, and Maclaurin, proved by very refined investigations, carried on with the aid of the fluxional calculus, that the obtuse angle must be $109^{\circ} 28'$, and the acute $70^{\circ} 32'$, to save the most wax and work possible. Maraldi found, by actual measurement, that the angles are *about* 110° and 70° . These angles never vary in any place; and it is scarcely less singular, that the breadths of all bees' cells are every where precisely the same, the drone or male cells being 5.18ths, and the worker or female cells 13.60ths of an inch in breadth and this in all countries and times.

This little insect works with a truth and correctness which are perfect, and according to principles at which man has arrived only after ages of slow improvement in the most difficult branch of the most difficult science. But to the Mighty and All-wise Creator, who made the insect and the philosopher, bestowing reason on the latter, and giving the former to work without it—to Him all truths are known from all eternity, with an intuition that mocks even the conceptions of the sagest of human kind.

It may be recollected, that when the air is exhausted or sucked out of any vessel, there is no longer the force necessary to resist the pressure of the air on the outside; and the sides of the vessels are therefore pressed inwards with violence: a flat glass would thus be broken, unless it were very thick; a round one, having the strength of an arch, would resist better; but any soft substance, as leather or skin, would be crushed or squeezed together at once. If the air was only sucked out slowly, the squeezing would be gradual, or, if it were only half sucked out, the skin would only be partly squeezed together. This is the process by which *bees* reach the fine dust and juices of hollow flowers, like the honeysuckle, and some kinds of long fox-glove, which are too narrow for them to enter. They fill up the mouth of the flower with their bodies, and suck out the air, or at least a large part of it; this makes the soft sides of the flower close, and squeezes the dust and juice towards the insect as well as a hand could do, if applied to the outside.

We may remember this pressure or weight of the atmosphere as shown by the barometer, and the sucking-pump. Its weight is near fifteen pounds on every square inch, so that if we could entirely squeeze out the air between our two hands, they would cling together with a force equal to the pressure of double this weight, because the air would press upon both hands; and if we could contrive to suck or squeeze out the air between one hand and the wall, the hand would stick fast to the wall, being pressed on it with the weight of above two hundred weight, that is, near fifteen pounds on every

square inch of the hand. Now, by a late most curious discovery of Sir Everard Home, the distinguished anatomist, it is found that this is the very process by which *flies* and other insects of a similar description are enabled to walk up perpendicular surfaces, however smooth, as the sides of walls and panes of glass in windows, and to walk as easily along the ceiling of a room with their bodies downwards and their feet over head. Their feet, when examined by a microscope, are found to have flat skins or flaps, like the feet of web-footed animals, as ducks and geese; and they have by means of strong folds the power of drawing the flap close down upon the glass or wall the fly walks on, and thus squeezing out the air completely, so as to make a vacuum between the foot and the glass or wall. The consequence of this is, that the air presses the foot on the wall with a very considerable force compared to the weight of the fly; for if its feet are to its body in the same proportion as ours are to our bodies, since we could support by a single hand on the ceiling of the room (provided it made a vacuum) more than our whole weight, namely, a weight of above fifteen stone, the fly can easily move on four feet in the same manner by help of the vacuum made under its feet.

It has likewise been found that some of the larger *sea-animals* are by the same construction, only upon a greater scale, enabled to climb the perpendicular and smooth surfaces of the ice hills among which they live. Some kinds of *lizard* have a like power of climbing, and of creeping with their bodies downwards along the ceiling of a room; and the means by which they are enabled to do so are the same. In the large feet of those animals, the contrivance is easily observed, of the toes and muscles, by which the skin of the foot is pinned down, and the air excluded in the act of walking or climbing; but it is the very same, only upon a larger scale, with the mechanism of a fly's or a butterfly's foot; and both operations, the climbing of the sea-horse on the ice, and the creeping of the fly on the window or the ceiling, are performed exactly by the same power, the weight of the atmosphere, which causes the quick-

silver to stand in the weather-glass, the wind to whistle through a key-hole, and the piston to descend in an old steam-engine.

Although philosophers are not agreed as to the peculiar action which light exerts upon vegetation, and there is even some doubt respecting the decomposition of air and water during that process, one thing is undeniable—the necessity of light to the growth and health of plants; without it they have neither colour, taste, nor smell; and, accordingly, they are for the most part so formed as to receive it at all times when it shines on them. Their cups, and the little assemblages of their leaves before they sprout, are found to be more or less affected by the light, so as to open and receive it. In several kinds of plants this is more evident than in others; their flowers close entirely at night, and open in the day. Some constantly turn round towards the light, following the sun, as it were, while he makes or seems to make his revolution, so that they receive the greatest quantity possible of his rays. Thus clover in a field follows the apparent course of the sun. But all leaves of plants turn to the sun, place them how you will, light being essential to their thriving.

The lightness of inflammable gas is well known. When bladders of any size are filled with it, they rise upwards and float in the air. Now, it is a most curious fact, ascertained by Mr. Knight, that the fine dust, by means of which plants are impregnated one from another, is composed of very small globules, filled with this gas—in a word, of small air-balloons. These globules thus float from the male plant through the air, and striking against the females, are detained by a glue prepared on purpose to stop them, which no sooner moistens the globules than they explode, and their substance remains, the gas flying off which enabled them to float. A provision of a very simple kind, is also, in some cases, made to prevent the male and female blossoms of the same plant from breeding together, this being found to hurt the breed of vegetables, just as breeding in and in spoils the race of animals. It is contrived that the dust shall be shed by the male blossom before the female of

the same plant is ready to be effected by it; so that the impregnation must be performed by the dust of some other plant, and in this way the breed be crossed. The light gas with which the globules are filled is most essential to the operation, as it conveys them to great distances. A plantation of yew-trees has been known, in this way, to impregnate another several hundred yards off.

The contrivance by which some creeper plants are enabled to climb walls, and fix themselves, deserves attention. The *Virginia creeper* has a small tendril, ending in a claw, each toe of which has a knob, thickly set with extremely small bristles; they grow into the invisible pores of the wall, and, swelling, stick there as long as the plant grows, and prevent the branch from falling; but when the plant dies, they become thin again, and drop out, so that the branch falls down.

The *vanilla* plant of the West Indies climbs round trees likewise by means of tendrils; but when it has fixed itself, the tendrils drop off, and leaves are formed.

It is found by chemical experiments, that the juice which is in the stomach of animals (called the *gastric* juice, from a Greek word signifying *the belly*) has very peculiar properties. Though it is for the most part a tasteless, clear, and seemingly a very simple liquor, it nevertheless, possesses extraordinary powers of dissolving substances which it touches or mixes with; and it varies in different classes of animals. In one particular, it is the same in all animals; it will not attack living matter, but only dead; the consequence of which is, that its powers of eating away and dissolving are perfectly safe to the animals themselves, in whose stomachs it remains without ever hurting them. This juice differs in different animals according to the food on which they subsist; thus, in birds of prey, as kites, hawks, owls, it only acts upon animal matter, and does not dissolve vegetables. In other birds, and in all animals feeding on plants, as oxen, sheep, hares, it dissolves vegetable matter, as grass, but will not touch flesh of any kind. This has been ascertained by making them swallow balls with meat in them, and several holes drilled through, to let the gastric juice reach the meat;

no effect was produced upon it. We may farther observe, that there is a most curious and beautiful correspondence between this juice in the stomachs of different animals and the other parts of their bodies, connected with the important operations of eating and digesting their food. The use of the juice is plainly to convert what they eat into a fluid, from which, by various other processes, all their parts, blood, bones, muscles, &c., are afterwards formed. But the food is first of all to be obtained, and then prepared by bruising for the action of the juice. Now birds of prey have instruments, their claws and beaks, for tearing and devouring their food, (that is, animals of various kinds,) but those instruments are useless for picking up and crushing seeds: accordingly, they have a gastric juice which dissolves the animals they eat; while birds which have only a beak fit for pecking, and eating seeds, have a juice that dissolves seeds, and not flesh. Nay more, it is found that the seeds must be bruised before the juice will dissolve them: this you find by trying the experiments in a vessel with the juice; and accordingly the birds have a gizzard, and animals which graze have flat teeth, which grind and bruise their food, before the gastric juice is to act upon it.

We have seen how wonderfully the *bee* works, according to rules discovered by man thousands of years after the insect had been following them with perfect accuracy. The same little animal seems to be acquainted with principles of which we are still ignorant. We can, by crossing, vary the forms of cattle with astonishing nicety; but we have no means of altering the nature of an animal once born, by means of treatment and feeding. This power, however, is undeniably possessed by the bees. When the queen bee is lost by death or otherwise, they choose a grub from among those which are born for workers; they make three cells into one, and placing the grub there, they build a tube round it; they afterwards build another cell of a pyramidal form, into which the grub grows; they feed it with peculiar food, and tend it with extreme care. It becomes, when transformed from the worm to the fly, not a worker, but a queen bee.

These singular insects resemble our own species, in one of our worst propensities, the disposition to war; but there attention to their sovereign is equally extraordinary, though of a somewhat capricious kind. In a few hours after their queen is lost, the whole hive is in a state of confusion. A singular humming is heard, and the bees are seen moving all over the surface of the combs with great rapidity. The news spread quickly, and when the queen is restored, quiet immediately succeeds. But if another queen is put upon them, they instantly discover the trick, and, surrounding her, they either suffocate or starve her to death. This happens if the false queen is introduced within a few hours after the first is lost or removed; but if twenty-four hours have elapsed, they will receive any queen, and obey her.

The labours and the policy of the *ants* are, when closely examined, still more wonderful, perhaps, than those of the *bees*. Their nest is a city consisting of dwelling-places, halls, streets, and squares into which the streets open. The food they principally like is the honey which comes from another insect found in their neighbourhood, and which they, generally speaking, bring home from day to day, as they want it. Late discoveries have shown that they do not eat grain, but live almost entirely on animal food and this honey. Some kinds of ant have the foresight to bring home the insects on whose honey they feed, and keep them in particular cells, where they guard them, to prevent their escaping, and feed them with proper vegetable matter which they do not eat themselves. Nay, they obtain the eggs of those insects, and superintend their hatching, and then rear the young insect until he becomes capable of supplying the desired honey. They sometimes remove them to the strongest parts of their nest, where there are cells apparently fortified for protecting them from invasion. In those cells the insects are kept to supply the wants of the whole ants which compose the population of the city. It is a most singular circumstance in the economy of nature, that the degree of cold at which the ant becomes torpid is also that at

which this insect falls into the same state. It is considerably below the freezing point; so that they require food the greater part of the winter, and if the insects on which they depend for food were not kept alive during the cold in which the ants can move about, the latter would be without the means of subsistence.

How trifling soever this little animal may appear in our climate, there are few more formidable creatures than the ant of some tropical countries. A traveller who lately filled a high station in the French government, Mr. Malouet, has described one of their cities, and were not the account confirmed by various testimonies, it might seem exaggerated. He observed at a great distance what seemed a lofty structure, and was informed by his guide that it consisted of an ant hill, which could not be approached without danger of being devoured. Its height was from fifteen to twenty feet, and its base thirty or forty feet square. Its sides inclined like the lower part of a pyramid, the point being cut off. He was informed that it became necessary to destroy these nests, by raising a sufficient force to dig a trench all round, and fill it with fagots, which were afterwards set on fire; and then battering with cannon from a distance, to drive the insects out and make them run into the flames. This was in South America; and African travellers have met with them in the same formidable numbers and strength.

The older writers of books upon the habits of some animals abound with stories which may be of doubtful credit. But the facts now stated, respecting the ant, and the bee, may be relied on as authentic. They are the result of very late observations, and experiments made with great accuracy by several most worthy and intelligent men; and the greater part of them have the confirmation arising from more than one observer having assisted in the inquiries.* The habits of *Beavers* are equally well authenticated, and being more

* A singular circumstance occasioned this in the case of Mr. Huber, by far the most eminent of these naturalists: he was quite blind, and performed all his experiments by means of assistants.

easily observed, are vouched by a greater number of witnesses. These animals, as if to enable them to live and move either on land or water, have two web-feet like those of ducks or water dogs, and two like those of land animals. When they wish to construct a dwelling place, or rather city, for it serves the whole body, they choose a level ground with a stream running through it; they then dam up the stream so as to make a pond, and perform the operation as skilfully as we could ourselves. Next they drive into the ground stakes of five or six feet long in rows, wattling each row with twigs, and puddling or filling the interstices with clay which they ram close in, so as to make the whole solid and water-tight. This dam is likewise shaped on the truest principles; for the upper side next the water slopes, and the side below is perpendicular; the base of the dam is ten or twelve feet thick; the top or narrow part two or three, and it is sometimes as long as one hundred feet.* The pond being thus formed and secured, they make their houses round the edge of it; they are cells, with vaulted roofs, and upon piles: they are made of stones, earth, and sticks; the walls are two feet thick, and plastered as neatly as if the trowel had been used. Sometimes they have two or three stories for retreating to in case of floods; and they always have two doors, one towards the water, and one towards the land. They keep their winter provisions in stores, and bring them out to use; they make their beds of moss; they

* If the base is twelve, and the top three feet thick, and the height six feet, the face must be the side of a right-angled triangle, whose height is eight feet. This would be the exact proportion which there ought to be, upon mathematical principles, to give the greatest resistance possible to the water in its tendency to turn the dam round, provided the materials of which it is made were lighter than water in the proportion of 44 to 100. But the materials are probably more than twice as heavy as water, and the form of so flat a dike is taken, in all likelihood, in order to guard against a more imminent danger—that of the dam being carried away by being shoved forwards. We cannot calculate what the proportions are which give the greatest possible resistance to this tendency, without knowing the tenacity of the materials, as well as their specific gravity. It may, very probably, be found that the construction is such as to secure the most completely against the two pressures at the same time.

live on the bark of trees, gums, and crawfish. Each house holds from twenty to thirty, and there may be from ten to twenty-five houses in all. Some of their communities are larger than others, but there are seldom fewer than two or three hundred inhabitants. In working they all bear their shares; some gnaw the trees and branches with their teeth to form stakes and beams; others roll the pieces to the water; others, diving, make holes with their teeth to place the piles in; others collect and carry stones and clay; others beat and mix the mortar; and others carry it on their broad tails, and with these beat it and plaster it. Some superintend the rest, and make signals by sharp strokes with their tail, which are carefully attended to; the beavers hastening to the place where they are wanted to work, or to repair any hole made by the water, or to defend themselves or make their escape, when attacked by an enemy.

The fitness of different animals, by their bodily structure, to the circumstances in which they are found, presents an endless subject of curious inquiry and pleasing contemplation. Thus, the *camel*, which lives in sandy deserts has broad spreading hoofs to support him on the loose soil; and an apparatus in his body by which water is kept for many days, to be used when no moisture can be had. As this would be useless in the neighbourhood of streams or wells, and as it would be equally so in the desert where no water is to be found, there can be no doubt that it is intended to assist in journeying across the sands from one watered spot to another. There is a singular and beautiful provision made in this animal's foot, for enabling it to sustain the fatigue of journeys under the pressure of its great weight. Beside the yielding of the bones and ligaments, or bindings, which gives elasticity to the foot of the deer and other animals, there is in the camel's foot, between the horny sole and the bones, a cushion, like a ball, of soft matter, almost fluid, but in which there is a mass of threads extremely elastic, interwoven with the pulpy substance. The cushion thus easily changes its shape when pressed,

yet it has such an elastic spring, that the bones of the foot press on it uninjured by the heavy body which they support, and this huge animal steps as softly as a cat.

Nor need we flee to the desert in order to witness an example of skilful structure; the limbs of the *horse* display it strikingly. The bones of the foot are not placed directly under the weight; if they were in an upright position they would make a firm pillar, and every motion would cause a shock. They are placed slanting or oblique, and tied together by an elastic binding on their lower surfaces, so as to form springs as exact as those which we make of leather and steel for carriages. Then the flatness of the hoof which stretches out on each side, and the frog coming down in the middle between the quarters, adds greatly to the elasticity of the machine. Ignorant of this, ill-informed farriers nail the shoe in such a manner as to fix the quarters, and cause permanent contraction of the bones, ligaments, and hoof—so that the elasticity is destroyed; every step is a shock; inflammation and lameness ensue.*

The *rein-deer* inhabits a country covered with snow the greater part of the year. Observe how admirably its hoof is formed for going over that cold and light substance, without sinking in it, or being frozen. The under side is covered entirely with hair, of a warm and close texture; and the hoof, altogether, is very broad, acting exactly like the snow-shoes which men have constructed for giving them a larger space to stand on than their feet, and thus avoid sinking. Moreover, the deer spreads the hoof as wide as possible when it touches the ground; but, as this breadth would be inconvenient in the air, by occasioning a greater resistance while he is moving along, no sooner does he lift the hoof than the two parts into which it is cloven fall together, and so lessen the surface exposed to the air, just as we may recollect the birds doing with their bodies and wings. The shape and structure of the hoof is also well adapted to scrape away the snow, and enable the animal to get

* Mr. Bracey Clark has contrived an expanding shoe, which, by a joint in front, opens and contracts, so as to obviate the evils of the common process.

at the particular kind of moss (or *lichen*) on which he feeds. This plant, unlike others, is in its full growth during the winter season ; and the rein-deer accordingly thrives from its abundance, at the season of his greatest use to man, notwithstanding the unfavourable effects of extreme cold upon the animal system.

There are some insects, of which the males have wings, and the females are grubs or worms. Of these, the *glow-worm* is the most remarkable : it is the female ; and the male is a fly, which would be unable to find her out, creeping as she does in the dark lanes, but for the shining light which she gives, to attract him.

There is a singular fish found in the Mediterranean, called the *nautilus*, from its skill in navigation. The back of its shell resembles the hulk of a ship ; on this it throws itself, and spreads two thin membranes to serve for two sails, paddling itself on with its feet, or feelers, as oars.

The *ostrich* lays and hatches her eggs in the sands : her form being ill adapted for sitting on them, she has a natural oven furnished by the sand, and the strong heat of the sun. The *cuckoo* is known to build no nest for herself, but to lay in the nests of other birds ; but late observations show that she does not lay indiscriminately in the nests of all birds ; she only chooses the nests of those which have bills of the same kind with herself, and, therefore, feed on the same kind of food. The *duck*, and other birds breeding in muddy places, have a peculiar formation of the bill : it is both made so as to act like a strainer, separating the finer from the grosser parts of the liquid, and it is more furnished with nerves near the point than the bills of birds which feed on substances more exposed to the light ; so that being more sensitive, it serves better to grope in the dark stream for food. The bill of the *snipe* is covered with a curious net work of nerves for the same purpose ; but the most singular provision of this kind is observed in a bird called the *toucan*, or *egg-sucker*, which chiefly feeds on the eggs found in birds' nests, and in countries where these are very deep and dark. Its bill is broad and long ; when examined, it appears completely co-

vered with branches of nerves in all directions ; so that, by groping in a deep and dark nest it can feel its way as accurately as the finest and most delicate finger could. Almost all kinds of birds build their nests of materials found where they inhabit, or use the nests of other birds ; but the *swallow of Java* lives in rocky caverns on the sea, where there are no materials at all for the purpose of building. It is therefore so formed as to secrete in its body a kind of slime with which it makes a nest, much prized as a delicate food in eastern countries.

Plants, in many remarkable instances, are provided for by equally wonderful and skilful contrivances. There is one, the *muscipula*, *fly-trap*, or *fly-catcher*. which has small prickles in the inside of two leaves, or half leaves, joined by a hinge ; a juice or sirup is provided on their inner surface, which acts as a bait to allure flies. There are several small pines or prickles standing upright in this sirup, and upon the only part of each leaf that is sensitive to the touch. When the fly, therefore, settles upon this part, its touching, as it were, the spring of the trap, occasions the leaves to shut, and kill and squeeze the insect ; whose juices and the air arising from their rotting serve as food to the plant.

In the West Indies, and other hot countries of South America, where rain sometimes does not fall for a great length of time, a kind of plant called the *wild-pine* grows upon the branches of the trees, and also on the bark of the trunk. It has hollow or bag-like leaves, so formed as to make little reservoirs of water, the rain falling into them through channels which close at the top when full, and prevent it from evaporating. The seed of this useful plant has small floating threads, by which, when carried through the air, it catches any tree in the way, and falls on it and grows. Wherever it takes root, though on the under side of a bough, it grows straight upwards, otherwise the leaves would not hold water. It holds in one leaf from a pint to a quart ; and although it must be of great use to the trees it grows on, to birds and other animals its use is even greater. " When we

find these pines," says Dampier, the famous navigator, "we stick our knives into the leaves just above the root, and the water gushing out, we catch it in our hats, as I myself have frequently done to my great relief."

Another tree, called the *water-with*, in Jamaica, has similar uses: it is like a vine in size and shape, and though growing in parched districts, is yet so full of clear sap or water, that, by cutting a piece two or three yards long, and merely holding it to the mouth, a plentiful draught is obtained. In the east there is a plant somewhat of the same kind, called *bejuco*, which grows near other trees and twines round them, with its end hanging downwards, but so full of juice, that, on cutting it, a good stream of water spouts from it; and this, not only by the stalk touching the tree so closely must refresh it, but affords a supply to animals, and to the weary herdsman on the mountains. Another plant, the *nepenthes distillatoria*, is found in the same regions, with a yet more singular structure. It has natural mugs or tankards hanging from its leaves, and holding each from a pint to a quart of very pure water. Two singular provisions are to be marked in this vegetable. There grows over the mouth of the tankard, a leaf nearly its size and shape, like a lid or cover, which prevents evaporation from the sun's rays; and the water that fills the tankard is perfectly sweet and clear, although the ground in which the plant grows is a marsh of the most muddy and unwholesome kind. The process of vegetation filtrates or distils the liquid, so as to produce, from the worst, the purest water.* The *palo de vaca*, or cow-tree, grows in South America, upon the most dry and rocky soil, and in a climate where for months not a drop of rain falls. On piercing the trunk, however, a sweet and nourishing milk is obtained, which the natives gladly receive in large bowls. If some plants thus furnish drink, where it might least be expected, others prepare, as it were, in

* A specimen of this curious plant, though of a small size, is to be found in the fine collection at Wentworth, reared by Mr. Cooper.

the desert, the food of man in abundance. A single *tapioca* tree is said to afford, from its pith, the whole sustenance of several men for a season.

V. ADVANTAGES AND PLEASURES OF SCIENCE.

AFTER the many instances or samples which have now been given of the nature and objects of Natural Science, we might proceed to a different field, and describe in the same way the other grand branch of human knowledge, that which teaches the properties or habits of *Mind*—the *intellectual faculties* of man, or the powers of his understanding, by which he perceives, imagines, remembers, and reasons;—his *moral faculties*, or the feelings and passions which influence him;—and, lastly, as a conclusion or result drawn from the whole, his *duties* both towards himself as an individual, and towards others as a member of society; which last head opens to our view the whole doctrines of *political science*, including the nature of *governments*, of *policy*, and generally of *laws*. But we shall abstain at present from entering at all upon this field, and shall now take up the subject more particularly pointed at through the course of the foregoing observations, and to illustrate which they have been framed, namely—the Use and Pleasure of Scientific Studies.

Man is composed of two parts, body and mind, connected indeed together, but wholly different from one another. The nature of the union—the part of our outward and visible frame in which it is peculiarly formed—or whether the soul be indeed connected or not with any particular portion of the body, so as to reside there—are points as yet wholly hid from our knowledge, and which are likely to remain for ever concealed. But this we know, as certainly as we can know any truth, that there is such a thing as the *Mind*; and that we have at the least as good proof of its existence, independent of the body, as we have of the existence of the body itself. Each has its uses, and each has its peculiar gratifications. The bounty of Providence has given us outward

senses to be employed, and has furnished the means of gratifying them in various kind, and in ample measure. As long as we only taste those pleasures according to the rules of prudence and of our duty, that is, in moderation for our own sakes, and in harmlessness towards our neighbours, we fulfill rather than thwart the purpose of our being. But the same bountiful Providence has endowed us with the higher nature also—with understandings as well as with senses—with faculties that are of a more exalted order, and admit of more refined enjoyments, than any to which the bodily frame can minister; and by pursuing such gratifications, rather than those of mere sense, we fulfill the most exalted ends of our creation, and obtain both a present and a future reward. These things are often said, but they are not therefore the less true, or the less worthy of deep attention. Let us mark their practical application to the occupations and enjoyments of all branches of society, beginning with those who form the great bulk of every community, the working classes, by what names soever their vocations may be called—professions, arts, trades, handicrafts, or common labour.

1. The first object of every man who has to depend upon his own exertions must needs be to provide for his daily wants. This is a high and important office; it deserves his utmost attention; it includes some of his most sacred duties, both to himself, his kindred, and his country; and although, in performing this task, he is only influenced by a regard to his own interest, or by his necessities, yet it is an employment which renders him truly the best benefactor of the community he belongs to. All other pursuits must give way to this; the hours which he devotes to learning must be after he has done his work; his independence, without which he is not fit to be called a man, requires first of all that he should have ensured for himself, and those dependent on him, a comfortable subsistence before he can have a right to taste any indulgence, either of his senses or of his mind; and the more he learns—the greater progress he makes in the sciences—the more will he value that independence, and the more will he prize the industry, the

habits of regular labour, whereby he is enabled to secure so prime a blessing.

In one view, it is true, the progress which he makes in science may help his ordinary exertions, the main business of every man's life. There is hardly any trade or occupation in which useful lessons may not be learned by studying one science or another. The necessity of science to the more liberal professions is self-evident; little less manifest is the use to their members of extending their knowledge beyond the branches of study with which their several pursuits are peculiarly conversant. But the other departments of industry derive hardly less benefit from the same source. To how many kinds of workmen must a knowledge of Mechanical Philosophy be useful? To how many others does chemistry prove almost necessary? Every one must with a glance perceive that to engineers, watch-makers, instrument-makers, bleachers, and dyers, those sciences are most useful, if not necessary. But carpenters and masons are surely likely to do their work better for knowing how to measure, which Practical Mathematics teaches them, and how to estimate the strength of timber, of walls, and of arches, which they learn from Practical Mechanics; and they who work in various metals are certain to be the more skilful in their trades for knowing the nature of those substances, and their relations to both heat and other metals, and to the airs and liquids they come in contact with. Nay, the farm-servant, or day-labourer, whether in his master's employ, or tending the concerns of his own cottage, must derive great practical benefit—must be both a better servant, and a more thrifty, and therefore comfortable, cottager, for knowing something of the nature of soils and manures, which chemistry teaches, and something of the habits of animals, and the qualities and growth of plants, which he learns from Natural History and chemistry together. In truth, though a man be neither mechanic nor peasant, but only one having a pot to boil, he is sure to learn from science lessons which will enable him to cook his morsel better, save his fuel, and both vary his dish and improve it. The art of good and cheap cookery is intimately con-

connected with the principles of chemical philosophy, and has received much, and will yet receive more, improvement from their application. Nor is it enough to say, that philosophers may discover all that is wanted, and may invent practical methods, which it is sufficient for the working man to learn by rote, without knowing the principles. He never will work so well if he is ignorant of the principles; and for a plain reason:—if he only learn his lesson by rote, the least change of circumstances puts him out. Be the method ever so general, cases will always arise in which it must be varied in order to apply; and if the workman only knows the rule without knowing the reason, he must be at fault the moment he is required to make any new application of it. This, then, is the *first* use of learning the principles of science: it makes men more skilful, expert, and useful, in the particular kinds of work by which they are to earn their bread, and by which they are to make it go far and taste well when earned.

2. But another use of such knowledge to handicraftsmen is equally obvious: it gives every man a chance, according to his natural talents, of becoming an improver of the art he works at, and even a discoverer in the sciences connected with it. He is daily handling the tools and materials with which new experiments are to be made; and daily witnessing the operations of nature, whether in the motions and pressures of bodies, or in their chemical actions on each other. All opportunities of making experiments must be unimproved, all appearances must pass unobserved, if he has no knowledge of the principles; but with this knowledge he is more likely than another person to strike out something new which may be useful in art, or curious or interesting in science. Very few great discoveries have been made by chance and by ignorant persons, much fewer than is generally supposed. It is commonly told of the steam-engine, that an idle boy being employed to stop and open a valve, saw that he could save himself the trouble of attending and watching it, by fixing a plug upon a part of the machine which came to the place at the proper times, in consequence of the general move-

ment. This is possible, no doubt; though nothing very certain is known respecting the origin of the story; but improvements of any value are very seldom indeed so easily found out, and hardly another instance can be named of important discoveries so purely accidental. They are generally made by persons of competent knowledge, and who are in search of them. The improvements of the steam-engine by Watt resulted from the most learned investigation of mathematical, mechanical, and chemical truths. Arkwright devoted many years, five at the least, to his invention of spinning jennies, and he was a man perfectly conversant in every thing that relates to the construction of machinery: he had minutely examined it, and knew the effects of each part, though he had not received any thing like a scientific education. If he had, we should in all probability have been indebted to him for scientific discoveries, as well as practical improvements. The most beautiful and useful invention of late times, the safety-lamp, was the reward of a series of philosophical experiments made by one thoroughly skilled in every branch of chemical science. The new process of refining sugar, by which more money has been made in a shorter time, and with less risk and trouble, than was ever perhaps gained from an invention, was discovered by a most accomplished chemist,* and was the fruit of a long course of experiments, in the progress of which, known philosophical principles were constantly applied, and one or two new principles ascertained. But in so far as chance has any thing to do with discovery, surely it is worth the while of those who are constantly working in particular employments to obtain the knowledge required, because their chances are greater than other people's of so applying that knowledge as to hit upon new and useful ideas: they are always in the way of perceiving what is wanting, or what is amiss in the old methods; and they have a better chance of making the improvements. In a word, to use a common expression, they are in the way of good luck; and if they possess the requisite informa-

* Edward Howard, brother of the Duke of Norfolk.

tion, they can take advantage of it when it comes to them. This, then, is the *second* great use of learning the sciences: it enables men to make improvements in the arts, and discoveries in philosophy, which may directly benefit themselves and mankind.

3. Now, these are the *practical* advantages of learning; but the *third* benefit is, when rightly considered, just as practical as the other two—the pleasure derived from mere knowledge, without any view to our own bodily enjoyments: and this applies to all classes, the idle as well as the industrious, if, indeed, it be not peculiarly applicable to those who enjoy the inestimable blessing of having time at their command. Every man is by nature endowed with the power of gaining knowledge; and the taste for it, the capacity to be pleased with it, forms equally a part of the natural constitution of his mind. It is his own fault, or the fault of his education, if he derives no gratification from it. There is a satisfaction in knowing what others know—in not being more ignorant than those we live with: there is a satisfaction in knowing what others do not know—in being more informed than they are. But this is quite independent of the pure pleasure of knowledge—of gratifying a curiosity implanted in us by Providence, to lead us towards the better understanding of the universe in which our lot is cast, and the nature wherewithal we are clothed. That every man is capable of being delighted with extending his information upon matters of science, will be evident from a few plain considerations.

Reflect how many parts of the reading, even of persons ignorant of all sciences, refer to matters wholly unconnected with any interest or advantage to be derived from the knowledge acquired. Every one is amused with reading a story: a romance may divert some, and a fairy tale may entertain others; but no benefit beyond the amusement is derived from this source: the imagination is gratified; and we willingly spend a good deal of time and a little money in this gratification, rather than in resting after fatigue, or in any other bodily indulgence. So we read a newspa-

per, without any view to the advantage we are to gain from learning the news, but because it interests and amuses us to know what is passing. One object, no doubt, is to become acquainted with matters relating to the welfare of the country; but we also read the occurrences which do little or not at all regard the public interests, and we take a pleasure in reading them. Accidents, adventures, anecdotes, crimes, and a variety of other things, amuse us, independent of the information respecting public affairs, in which we feel interested as citizens of the state, or as members of a particular body. It is of little importance to inquire how and why these things excite our attention, and wherefore the reading about them is a pleasure: the fact is certain; and it proves clearly that there is a positive enjoyment in knowing what we did not know before: and this pleasure is greatly increased when the information is such as excites our surprise, wonder, or admiration. Most persons who take delight in reading tales of ghosts, which they know to be false, and feel all the while to be silly in the extreme, are merely gratified, or rather occupied, with the strong emotions of horror excited by the momentary belief, for it can only last an instant. Such reading is a degrading waste of precious time, and has even a bad effect upon the feelings and the judgment.* But true stories of horrid crimes, as murders, and pitiable misfortunes, as shipwrecks, are not much more instructive. It may be better to read these than to sit yawning and idle—much better than to sit drinking or gaming, which, when carried to the least excess, are crimes in themselves, and the fruitful parents of many more. But this is nearly as much as can be said for such vain and unprofitable reading. If it be a pleasure to gratify curiosity, to know what we were igno-

* *Children's Books* have at all times been made upon the pernicious plan of exciting wonder, generally horror, at whatever risk. The folly and misery occasioned by this error it would be difficult to estimate. The time may come when it will be felt and understood. At present, the inveterate habits of parents and nurses prevent children from benefiting by the excellent lessons of Mr. Barbauld and Miss Edgeworth.

rant of, to have our feelings of wonder called forth, how pure a delight of this very kind does natural science hold out to its students! Recollect some of the extraordinary discoveries of mechanical philosophy. How wonderful are the laws that regulate the motions of fluids! Is there any thing in all the idle books of tales and horrors more truly astonishing than the fact, that a few pounds of water may, by mere pressure, without any machinery—by merely being placed in a particular way, produce an irresistible force? What can be more strange, than that an ounce weight should balance hundreds of pounds, by the intervention of a few bars of thin iron? Observe the extraordinary truths which optical science discloses. Can any thing surprise us more, than to find that the colour of white is a mixture of all others—that red, and blue, and green, and all the rest, merely by being blended in certain proportions, form what we had fancied rather to be no colour at all, than all colours together? Chemistry is not behind in its wonders. That the diamond should be made of the same material with coal; that water should be chiefly composed of an inflammable substance; that acids should be, for the most part, formed of different kinds of air, and that one of those acids, whose strength can dissolve almost any of the metals, should consist of the self-same ingredients with the common air we breathe; that salts should be of a metallic nature, and composed, in great part, of metals, fluid like quicksilver, but lighter than water, and which, without any heating, take fire upon being exposed to the air, and by burning form the substance so abounding in saltpetre and in the ashes of burnt wood:—these, surely, are things to excite the wonder of any reflecting mind—nay, of any one but little accustomed to reflect. And yet these are trifling when compared to the prodigies which astronomy opens to our view: the enormous masses of the heavenly bodies; their immense distances; their countless numbers, and their motions, whose swiftness mocks the uttermost efforts of the imagination.

Akin to this pleasure of contemplating new and extraordinary truths, is the gratification of a more learned

curiosity, by tracing resemblances and relations between things which, to common apprehension, seem widely different. Mathematical science, to thinking minds, affords this pleasure in a high degree. It is agreeable to know that the three angles of every triangle, whatever be its size, howsoever its sides may be inclined to each other, are always of necessity, when taken together, the same in amount: that any regular kind of figure whatever, upon the one side of a right-angled triangle, is equal to the two figures of the same kind upon the two other sides, whatever be the size of the triangle: that the properties of an oval curve are extremely similar to those of a curve, which appears the least like it of any, consisting of two branches of infinite extent, with their backs turned to each other. To trace such unexpected resemblances is, indeed, the object of all philosophy; and experimental science, in particular, is occupied with such investigations, giving us general views, and enabling us to explain the appearances of nature, that is, to show how one appearance is connected with another. But we are now considering only the gratification derived from learning these things.

It is surely a satisfaction, for instance, to know that the same thing, or motion, or whatever it is, which causes the sensation of heat, causes also fluidity, and expands bodies in all directions; that electricity, the light which is seen on the back of a cat when slightly rubbed on a frosty evening, is the very same matter with the lightning of the clouds;—that plants breathe like ourselves, but differently by day and by night;—that the air which burns in our lamps enables a balloon to mount, and causes the globules of the dust of plants to rise, float through the air, and continue their race—in a word, is the immediate cause of vegetation. Nothing can at first view appear less like, or less likely to be caused by the same thing, than the processes of burning and of breathing—the rust of metals and burning—an acid and rust—the influence of a plant on the air it grows in by night, and of an animal on the same air at any time, nay, of a body burning in that air; and yet all these are the same operation. It is an undeniable

fact, that the very same thing which make the fire burn, makes metals rust, forms acids, and enables plants and animals to breathe; that these operations, so unlike to common eyes, when examined by the light of science, are the same—the rusting of metals—the formation of acids—the burning of inflammable bodies—the breathing of animals—and the growth of plants by night. To know this is a positive gratification. Is it not pleasing to find the same substance in various situations extremely unlike each other;—to meet with fixed air as the produce of burning, of breathing, and of vegetation;—to find that it is the choke-damp of mines, the bad air in the grotto of Naples, the cause of death in neglecting brewers' vats, and of the brisk and acid flavour of Seltzer and other mineral springs? Nothing can be less like than the working of a vast steam-engine, of the old construction, and the crawling of a fly upon the window. Yet we find that these two operations are performed by the same means, the weight of the atmosphere, and that a sea-horse climbs the ice-hills by no other power. Can any thing be more strange to contemplate? Is there in all the fairy-tales that ever were fancied, any thing more calculated to arrest the attention and to occupy and to gratify the mind, than this most unexpected resemblance between things so unlike, to the eyes of the ordinary beholders? What more pleasing occupation than to see uncovered and bared before our eyes the very instrument and the process by which nature works? Then we raise our views to the structure of the heavens; and are again gratified with tracing accurate but most unexpected resemblances. Is it not in the highest degree interesting, to find that the power which keeps this earth in its shape, and in its path, wheeling upon its axis round the sun, extends over all the other worlds that compose the universe, and gives to each its proper place and motion; that this same power keeps the moon in her path round our earth, and our earth in its path round the sun, and each planet in its path; that the same power causes the tides upon our globe, and the peculiar form of the globe itself; and that, after all, it is the same power which

makes a stone fall to the ground? To learn these things, and to reflect upon them, occupies the faculties, fills the mind, and produces certain as well as pure gratification.

But if the knowledge of the doctrines unfolded by science is pleasing, so is the being able to trace the steps by which those doctrines are investigated, and their truth demonstrated: indeed, you cannot be said, in any sense of the word, to have learned them, or to know them, if you have not so studied them as to perceive how they are proved. Without this you never can expect to remember them long, or to understand them accurately; and that would of itself be reason enough for examining closely the grounds they rest on. But there is the highest gratification of all, in being able to see distinctly those grounds, so as to be satisfied that a belief in the doctrines is well founded. Hence, to follow a demonstration of a grand mathematical truth—to perceive how clearly and how inevitably one step succeeds another, and how the whole steps lead to the conclusion—to observe how certainly and unerringly the reasoning goes on from things perfectly self-evident, and by the smallest addition at each step, every one being as easily taken after the one before as the first step of all was, and yet the result being something not only far from self-evident, but so general and strange, that you can hardly believe it to be true, and are only convinced of it by going over the whole reasoning—this operation of the understanding, to those who so exercise themselves, always affords the highest delight. The contemplation of experimental inquiries, and the examination of reasoning founded upon the facts which our experiments and observations disclose, is another fruitful source of enjoyment, and no other means can be devised for either imprinting the results upon our memory, or enabling us really to enjoy the whole pleasures of science. They who found the study of some branches dry and tedious at the first, have generally become more and more interested as they went on; each difficulty overcome gives an additional relish to the pursuit, and makes us feel, as it were, that we have by our work and labour esta-

blished a right of property in the subject. Let any man pass an evening in vacant idleness, or even in reading some silly tale, and compare the state of his mind when he goes to sleep or gets up next morning with its state some other day, when he has passed a few hours in going through the proofs, by facts and reasoning, of some of the great doctrines in natural science, learning truths wholly new to him, and satisfying himself by careful examination of the grounds on which known truths rest, so as to be not only acquainted with the doctrines themselves, but able to show why he believes them, and to prove before others that they are true:—he will find as great a difference as can exist in the same being—the difference between looking back upon time unprofitably wasted, and time spent in self-improvement: he will feel himself in the one case listless and dissatisfied, in the other comfortable and happy: in the one case, if he do not appear to himself humbled, at least he will not have earned any claim to his own respect; in the other case, he will enjoy a proud consciousness of having, by his own exertions, become a wiser and, therefore, a more exalted creature.

To pass our time in the study of the sciences, in learning what others have discovered, and in extending the bounds of human knowledge, has, in all ages, been reckoned the most dignified and happy of human occupations; and the name of philosopher, or lover of wisdom, is given to those who lead such a life. But it is by no means necessary that a man should do nothing else than study known truths, and explore new, in order to earn this high title. Some of the greatest philosophers, in all ages, have been engaged in the pursuits of active life; and an assiduous devotion of the bulk of our time to the work which our condition requires, is an important duty, and indicates the possession of practical wisdom. This, however, does by no means hinder us from applying the rest of our time, beside what nature requires for meals and rest, to the study of science; and he who, in whatever station his lot may be cast, works his day's work, and improves his mind in the evening, as well as he who, placed above such

necessity, prefers the refined and elevating pleasures of knowledge to the low gratification of the senses, richly deserves the name of a true philosopher.

One of the most delightful treats which science affords us is the knowledge of the extraordinary powers with which the human mind is endowed. No man, until he has studied philosophy, can have a just idea of the great things for which Providence has fitted his understanding—the extraordinary disproportion which there is between his natural strength, and the powers of his mind and the force he derives from them. When we survey the marvellous truths of astronomy, we are first of all lost in the feeling of immense space, and of the comparative insignificance of this globe and its inhabitants. But there soon arises a sense of gratification and of new wonder at perceiving how so insignificant a creature has been able to reach such a knowledge of the unbounded system of the universe—to penetrate, as it were, through all space, and become familiar with the laws of nature at distances so enormous as baffle our imagination—to be able to say, not merely that the sun has 329,630 times the quantity of matter which our globe has, Jupiter 308 $\frac{1}{2}$, and Saturn 93 $\frac{1}{2}$ times; but that a pound of lead weighs at the sun, 22 lbs. 15 ozs. 16 dwts. 8 grs. and $\frac{3}{4}$ of a grain! at Jupiter, 2 lbs. 1 oz. 19 dwts. 1 gr. $\frac{2}{3}$; and at Saturn, 1 lb. 3 ozs. 8 dwts. 20 grs. $\frac{1}{11}$ part of a grain! And what is far more wonderful, to discover the laws by which the whole of this vast system is held together and maintained through countless ages in perfect security and order. It is surely no mean reward of our labour to become acquainted with the prodigious genius of those who have almost exalted the nature of man above its destined sphere, when admitted to a fellowship with these loftier minds, we discover how it comes to pass that, by universal consent, they hold a station apart, rising over all the great teachers of mankind, and spoken of reverently, as if NEWTON and LAPLACE were not the names of mortal men.

The highest of all our gratifications in the contemplations of science remains: we are raised by them to

an understanding of the infinite wisdom and goodness which the creator has displayed in his works. Not a step can we take in any direction without perceiving the most extraordinary traces of design; and the skill every where conspicuous is calculated, in so vast a proportion of instances, to promote the happiness of living creatures, and especially of our own kind, that we can feel no hesitation in concluding that if we knew the whole scheme of Providence, every part would be found in harmony with a plan of absolute benevolence. Independently, however, of this most consoling inference, the delight is inexpressible of being able to follow, as it were, with our eyes, the marvellous works of the great architect of nature—to trace the unbounded power and exquisite skill which are exhibited in the most minute, as well as the mightiest parts of his system. The pleasure derived from this study is unceasing, and so various, that it never tires the appetite. But it is unlike the low gratifications of sense in another respect: while those hurt the health, debase the understanding, and corrupt the feelings, this elevates and refines our nature, teaching us to look upon all earthly objects as insignificant and below our notice, except the pursuit of knowledge and the cultivation of virtue; and giving a dignity and importance to the enjoyment of life, which the frivolous and the grovelling cannot even comprehend.

Let us, then, conclude, that the pleasures of science go hand in hand with the solid benefits derived from it; that they tend, unlike other gratifications, not only to make our lives more agreeable, but better; and that a rational being is bound by every motive of interest and of duty, to direct his mind towards pursuits which are found to be the sure path of virtue as well as of happiness.

HISTORICAL NOTE ON THE DISCOVERY OF THE
THEORY OF THE COMPOSITION OF WATER. BY
THE RIGHT HON. HENRY LORD BROUGHAM,
F.R.S., AND MEMBER OF THE NATIONAL INSTI-
TUTE OF FRANCE. PUBLISHED AS AN APPEN-
DIX TO A MEMOIR OF JAMES WATT.

THERE can be no doubt whatever, that the experi-
ment of Mr. Warltire, related in Dr. Priestley's 5th
volume,* gave rise to this inquiry, at least in England ;

* Mr. Warltire's letter is dated Birmingham, 18th April 1781, and was published by Dr. Priestley in the appendix to the 2d Vol. of his "Experiments and Observations relating to various branches of Natural Philosophy ; with a continuation of the observations on air,"—forming, in fact, the 5th volume of his "experiments and observations on different kinds of air;" printed at Birmingham in 1781.

Mr. Warltire's first experiments were made in a copper ball or flask, which held three wine pints, the weight 14 oz.; and his object was to determine "whether heat is heavy or not." After stating his mode of mixing the airs, and of adjusting the balance, he says, he "always accurately balanced the flask of common air, then found the difference of weight after the inflammable air was introduced, that he might be certain he had confined the proper proportion of each. The electric spark having passed through them, the flask became hot, and was cooled by exposing it to the common air of the room : it was then hung up again to the balance, and a loss of weight was always found, but not constantly the same; upon an average it was two grains."

He goes on to say, "I have fired air in glass vessels, since I saw you (Dr. Priestley) venture to do it, and I have observed, *as you did*, that, though the glass was clean and dry before, yet, after firing the air, it became dewy, and was lined with a sooty substance."

As you are upon a nice balancing of claims, ought not Dr. Priestley to have the credit of first noticing the dew ?

In some remarks which follow, by Dr. Priestley, he confirms the loss of weight, and adds, "I do not think, however, that so very bold an opinion, as that of the latent heat of bodies contributing to their weight, should be received without more experiments, and made upon

Mr. Cavendish expressly refers to it, as, having set him upon making his experiments.—(Phil. Trans. 1784, p. 126.) The experiment of Mr. Warltire consisted in firing, by electricity, a mixture of inflammable and common air in a close vessel, and two things were said to be observed; *first*, a sensible loss of weight; *second*, a dewy deposite on the sides of the vessel.

Mr. Watt, in a note to p. 332 of his paper, Phil. Trans. 1784, inadvertently states, that the dewy deposite was first observed by Mr. Cavendish; but Mr. Cavendish himself, p. 127, expressly states Mr. Warltire to have observed it, and cites Dr. Priestley's 5th volume.

Mr. Cavendish himself could find no loss of weight, and he says, that Dr. Priestley had also tried the experiment, and found none.* But Mr. Cavendish found there was always a dewy deposite, without any sooty matter. The result of many trials was, that common air and inflammable air being burnt together, in the proportion of 1000 measures of the former to 423 of the latter, "about one-fifth of the common air, and nearly all the inflammable air, lose their elasticity, and *are condensed into the dew* which lines the glass." He examined the dew, and found it to be pure water. He therefore concludes, that "almost all the inflammable air, and about one-sixth of the common air, are turned into pure water."

Mr. Cavendish then burned, in the same way, dephlogisticated and inflammable airs, (oxygen and hydrogen gases,) and the deposite was always more or less acidulous, accordingly as the air burnt with the inflammable air was more or less phlogisticated. The acid was found

a still larger scale. If it be confirmed, it will no doubt be thought to be a fact of a very remarkable nature, and will do the greatest honour to the sagacity of Mr. Warltire. I must add, that the moment he saw the moisture on the inside of the close glass vessel in which I afterwards fired the inflammable air, he said, that it confirmed an opinion he had long entertained, viz. that common air deposits its moisture when it is phlogisticated."

It seems evident, that neither Mr. Warltire, nor Dr. Priestley, attributed the dew to any thing else than a mechanical deposite of the moisture suspended in common air.—[NOTE BY MR. JAMES WATT.]

* Mr. Cavendish's note, p. 127, would seem to imply this; but I have not found, in any of Dr. Priestley's papers, that he has said so.—[NOTE BY MR. JAMES WATT.]

to be nitrous. Mr. Cavendish states, that "almost the whole of the inflammable and dephlogisticated air is *converted into pure water.*" And, again, that "if these airs could be obtained perfectly pure, the whole would be condensed." And he accounts for common air and inflammable air, when burnt together, not producing acid, by supposing that the heat produced is not sufficient. He then says that these experiments, with the exception of what relates to the acid, were made in the summer of 1781, and mentioned to Dr. Priestley; and adds, that "a friend of his, (Mr. Cavendish's) last summer, (that is, 1783,) gave some account of them to Mr. Lavoisier, as well as of the conclusion drawn from them, that dephlogisticated air is only water deprived of its phlogiston; but, at that time, so far was Mr. Lavoisier from thinking any such opinion warranted, that till he was prevailed upon to repeat the experiment himself, he found some difficulty in believing that nearly the whole of the two airs could be converted into water." The friend is known to have been Dr., afterwards Sir Charles Blagden; and it is a remarkable circumstance, that this passage of Mr. Cavendish's paper appears not to have been in it when originally presented to the Royal Society; for the paper is apparently in Mr. Cavendish's hand, and the paragraph, p. 134, 135, is not found in it, but is added to it, and directed to be inserted in that place. It is, moreover, not in Mr. Cavendish's hand, but in Sir Charles Blagden's; and, indeed, the latter must have given him the information as to Mr. Lavoisier, with whom it is not said that Mr. Cavendish had any correspondence. The paper itself was read 15th January, 1784. The volume was published about six months afterwards.

Mr. Lavoisier's memoir (in the *Mém. de l'Académie des Sciences* for 1781,) had been read partly in November and December 1783, and additions were afterwards made to it. It was published in 1784. It contained Mr. Lavoisier's account of his experiments in June 1783, at which, he says, Sir Charles Blagden was present; and it states that he told Mr. Lavoisier of Mr. Cavendish having "already burnt inflammable air in

close vessels, and obtained a very sensible quantity of water." But he, Mr. Lavoisier, says nothing of Sir Charles Blagden having also mentioned Mr. Cavendish's conclusion from the experiment. He expressly states, that the weight of the water was equal to that of the two airs burnt, unless the heat and light which escape are ponderable, which he holds them not to be. His account, therefore, is not reconcilable with Sir Charles Blagden's, and the latter was most probably written as a contradiction of it, after Mr. Cavendish's paper had been read, and when the *Mémoires* of the Académie were received in this country. These *Mémoires* were published in 1784, and could not, certainly, have arrived, when Mr. Cavendish's paper was written, nor when it was read to the Royal Society.

But it is farther to be remarked, that the passage of Mr. Cavendish's paper in Sir Charles Blagden's handwriting, only mentions the experiments having been communicated to Dr. Priestley; they were made, says the passage, in 1781, and communicated to Dr. Priestley; it is not said when, nor is it said that "the conclusions drawn from them," and which Sir Charles Blagden says he communicated to Mr. Lavoisier in summer 1783, were ever communicated to Dr. Priestley; and Dr. Priestley, in his paper, (referred to in Mr. Cavendish's,) which was read June 1783, and written before April of that year, says nothing of Mr. Cavendish's theory, though he mentions his experiment.

Several propositions then are proved by this statement.

First, That Mr. Cavendish, in his paper, read 15th January 1784, relates the capital experiment of burning oxygen and hydrogen gases in a close vessel, and finding pure water to be the produce of the combustion.

Secondly, That, in the same paper, he drew from this experiment the conclusion, that the two gases were converted or turned into water.

Thirdly, That Sir Charles Blagden inserted in the same paper, with Mr. Cavendish's consent, a statement that the experiment had first been made by Mr. Caven-

dish in summer 1781, and mentioned to Dr. Priestley, though it is not said when, nor is it said that any conclusion was mentioned to Dr. Priestley, nor is it said at what time Mr. Cavendish first drew that conclusion.

A most material omission.

Fourthly, That in the addition made to the paper by Sir Charles Blagden, the conclusion of Mr. Cavendish is stated to be, that oxygen gas is water deprived of phlogiston; this addition having been made after Mr. Lavoisier's memoir arrived in England.

It may farther be observed, that in another addition to the paper, which is in Mr. Cavendish's handwriting, and which was certainly made after Mr. Lavoisier's memoir had arrived, Mr. Cavendish for the first time distinctly states, as upon Mr. Lavoisier's hypothesis, that water consists of hydrogen united to oxygen gas. There is no substantial difference, perhaps, between this and the conclusion stated to have been drawn by Mr. Cavendish himself, that oxygen gas is water deprived of phlogiston, supposing phlogiston to be synonymous with hydrogen; but the former proposition is certainly the more distinct and unequivocal of the two: and it is to be observed that Mr. Cavendish, in the original part of the paper, *i. e.* the part read January 1784, before the arrival of Lavoisier's, considers it more just to hold inflammable air to be phlogisticated water than pure phlogiston, (p. 140.)

We are now to see what Mr. Watt did; and the dates here become very material. It appears, that he wrote a letter to Dr. Priestley on 26th April 1783, in which he reasons on the experiment of burning the two gases in a close vessel, and draws the conclusion, "that water is composed of dephlogisticated air and phlogiston, deprived of part of their latent heat."* The letter

* It may with certainty be concluded from Mr. Watt's private and unpublished letters, of which the copies taken by his copying-machine, then recently invented, are preserved, that his theory of the composition of water was already formed in December 1782, and probably much earlier. Dr. Priestley, in his paper of 21st April 1783, p. 416, states, that Mr. Watt, prior to his (the Doctor's) experiments, had

was received by Dr. Priestley and delivered to Sir Joseph Banks, with a request that it might be read to the royal society; but Mr. Watt afterwards desired this to be delayed, in order that he might examine some new experiments of Dr. Priestley, so that it was not read until the 22nd April 1784. In the interval between the delivery of this letter to Dr. Priestley, and the reading of it, Mr. Watt had addressed another letter to Mr. De Luc, dated 26th November 1783,* with many farther observations and reasonings, but almost the whole of the original letter is preserved in this, and is distinguished by inverted commas. One of the passages thus marked, is that which has the important conclusion above mentioned; and that letter is stated, in the subsequent one, to have been communicated to several mem-

entertained the idea of the possibility of the conversion of water or steam into permanent air. And Mr. Watt himself, in his paper, *Phil. Trans.* p. 335, asserts, that for many years he had entertained the opinion that air was a modification of water, and he enters at some length into the facts and reasoning upon which that deduction was founded.—[NOTE BY MR. JAMES WATT.]

* The letter was addressed to Mr. J. A. De Luc, the well known Genevese philosopher, then a fellow of the Royal Society, and reader to Queen Charlotte. He was the friend of Mr. Watt, who did not then belong to the society. Mr. De Luc, following the motions of the court, was not always in London, and seldom attended the meetings of the Royal Society. He was not present when Mr. Cavendish's paper of 15th January 1784, was read; but, hearing of it from Dr. Blagden, he obtained a loan of it from Mr. Cavendish, and writes to Mr. Watt on the 1st March following, to apprise him of it, adding that he has perused it, and promising an analysis. In the postscript, he states, "In short, they expound and prove your system, word for word, and say nothing of you." The promised analysis is given in another letter of the 4th of the same month. Mr. Watt replies on the 6th, with all the feelings which a conviction he had been ill-treated was calculated to inspire, and makes use of those vivid expressions which M. Arago has quoted; he states his intention of being in London in the ensuing week, and his opinion, that the reading of his letter to the Royal Society will be the proper step to be taken. He accordingly went there, waited upon the president of the Royal Society, Sir Joseph Banks, was received with all the courtesy and just feeling which distinguished that most honourable man; and it was settled that both the letter to Dr. Priestley of 26th April 1783, and that to Mr. De Luc of 26th November 1783, should be successively read. The former was done on the 22d, and the latter on the 29th April 1784.—[NOTE BY MR. JAMES WATT.]

bers of the Royal Society at the time of its reaching Dr. Priestley, viz. April 1783.

In Mr. Cavendish's paper as at first read, no allusion is to be found to Mr. Watt's theory. But in an addition made in Mr. Cavendish's own hand, after Mr. Watt's paper had been read, there is a reference to that theory. (Phil. Trans. 1784, p. 140,) and Mr. Cavendish's reasons are given for not encumbering his theory with that part of Mr. Watt's which regards the evolution of latent heat. It is thus left somewhat doubtful, whether Mr. Cavendish had ever seen the letter of April, 1783, or whether he had seen only the paper (of 26th November, 1783,) of which that letter formed a part, and which was read 29th April, 1784. That the first letter was for some time (two months, as appears from the papers of Mr. Watt,) in the hands of Sir Joseph Banks, and other members of the society, during the preceding spring, is certain, from the statements in the note to p. 330; and that Sir Charles Blagden, the secretary, should not have seen it, seems impossible; for Sir Joseph Banks must have delivered it to him at the time when it was intended to be read at one of the society's meetings, (Phil. Trans. p. 330, note,) and, as the letter itself remains among the society's records, in the same volume with the paper into which the greater part of it was introduced, it must have been in the custody of Sir C. Blagden. It is equally difficult to suppose, that the person who wrote the remarkable passage already referred to, respecting Mr. Cavendish's conclusions having been communicated to Mr. Lavoisier in the summer of 1783, (that is, in June,) should not have mentioned to Mr. Cavendish that Mr. Watt had drawn the same conclusion in the spring of 1783, (that is, in April at the latest.) For the conclusions are identical, with the single difference, that Mr. Cavendish calls dephlogisticated air, water deprived of its phlogiston, and Mr. Watt says, that water is composed of dephlogisticated air and phlogiston.

We may remark, there is the same uncertainty or vagueness introduced into Mr. Watt's theory, which we before observed in Mr. Cavendish's, by the use of

the term phlogiston, without exactly defining it.* Mr. Cavendish leaves it uncertain, whether or not he meant by phlogiston simply inflammable air, and he inclines rather to call inflammable air, water united to phlogiston. Mr. Watt says expressly, even in his later paper, (of November, 1783,) and in a passage not to be found in the letter of April, 1783, that he thinks that inflammable air contains a small quantity of water, and much elementary heat. It must be admitted that such expressions as these on the part of both of those great men, betoken a certain hesitation respecting the theory of the composition of water. If they had ever formed to themselves the idea, that water is a compound of the two gases deprived of their latent heat, that is,—of the two gases,—with the same distinctiveness which marks Mr. Lavoisier's statement of the theory, such obscurity and uncertainty would have been avoided.†

* Mr. Watt, in a note to his paper of 26th November, 1783, p. 331, observes, "previous to Dr. Priestley's making these experiments, Mr. Kirwan had proved, by very ingenious deductions from other facts, that inflammable air was, in all probability, the real phlogiston in an aerial form. These arguments were perfectly convincing to me, but it seems proper to rest that part of the argument on direct experiment."—[NOTE BY MR. JAMES WATT.]

† Mr. Watt, in his letter of 26th April, 1783, thus expresses his theory and conclusions, (Phil. Trans. p. 333:)—"Let us now consider what obviously happens in the case of the deflagration of the inflammable and dephlogisticated air. These two kinds of air unite with violence, they become red hot, and, upon cooling, totally disappear. When the vessel is cooled, a quantity of water is found in it, equal to the weight of the air employed. This water is then the only remaining product of the process, and *water, light, and heat*, are all the products," (unless, he adds in the paper of November, there be some other matter set free, which escapes our senses.) "*Are we not then authorized to conclude, that water is composed of dephlogisticated air and phlogiston, deprived of their latent or elementary heat; that dephlogisticated or pure air is composed of water deprived of its phlogiston, and united to elementary heat and light; that the latter are contained in it in a latent state, so as not to be sensible to the thermometer or to the eye; and if light be only a modification of heat, or a circumstance attending it, or a component part of the inflammable air, then pure or dephlogisticated air is composed of water deprived of its phlogiston, and united to elementary heat?*"

Is not this as clear, precise, and intelligible, as the conclusions of Mr. Lavoisier?—[NOTE BY MR. JAMES WATT.]

The obscurity with which Lord Brougham charges the theoretical conceptions of Watt and Cavendish, does not appear to me well-founded. In 1784, the preparation of two permanent and very dissimilar gases

Several farther propositions may now be stated, as the result of the facts regarding Mr. Watt.

First, That there is no evidence of any person having reduced the theory of composition to writing, in a shape which now remains, so early as Mr. Watt.

Secondly, That he states the theory, both in April and November, 1783, in language somewhat more distinctly referring to composition, than Mr. Cavendish does in 1784, and that his reference to the evolution of latent heat renders it more distinct than Mr. Cavendish's.

Thirdly, That there is no proof, nor even any assertion, of Mr. Cavendish's theory (what Sir C. Blagden calls his conclusion,) having been communicated to Dr. Priestley before Mr. Watt stated his theory in 1783, still less of Mr. Watt having heard of it, while his whole let-

was known. Some called these gases, pure air and inflammable air; others, dephlogisticated air and phlogiston; and lastly, others, oxygen and hydrogen. By combining dephlogisticated air and phlogiston, water was produced equal in weight to that of the two gases. Water thenceforward was no longer a simple body, but a compound of dephlogisticated air and of phlogiston. The chemist who drew that conclusion, might have erroneous ideas as to the intimate nature of phlogiston, without that throwing any uncertainty upon the merit of his first discovery. Even at this day, have we *mathematically demonstrated* that hydrogen (or phlogiston) is an elementary body; or that it is not, as Watt and Cavendish supposed at the time, the combination of a radical and of a little water?—[NOTE BY M. ARAGO.]

It should be borne in mind that the new chemical nomenclature was not proposed to the Academy of Sciences by the Messrs. de Morveau, Lavoisier, Berthollet, and de Fourcroy, until 1787, accompanied by introductory memoirs by M. Lavoisier, and M. de Morveau.

Lavoisier himself had suggested the use of the term *acidifying principle*, or *oxygen*, in 1778, for the basis of pure or dephlogisticated air; and he used it in subsequent memoirs in 1780 and 1782; but it was not until the decomposition of water was discovered in 1783 and 1784, that he fully adopted it. Berthollet, perhaps the most philosophical chemist of France, did not become a convert to this nomenclature until 1785, nor did de Morveau and Fourcroy, according to the statement of the latter, fully enter into it until the end of 1786. As far as we recollect, it was first legitimated, if we may use the expression, in Lavoisier's System of Chemistry in 1789. It is surely, then, wrong to expect that Mr. Watt, in expounding his theory in 1783, should use a phraseology not generally sanctioned in France until four years later, not admitted by Black, Priestley, Kirwan, and other great English chemists, until a still more recent period, and by some of them never recognised at all.—[NOTE BY MR. JAMES WATT.]

ter shows that he never had been aware of it, either from Dr. Priestley, or from any other quarter.

Fourthly, That Mr. Watt's theory was well known among the members of the society, some months before Mr. Cavendish's statement appears to have been reduced into writing, and eight months before it was presented to the society. We may, indeed, go farther, and affirm, as another deduction from the facts and dates, that, as far as the evidence goes, there is proof of Mr. Watt having first drawn the conclusion, at least that no proof exists of any one having drawn it so early as he is proved to have done.

Lastly, That a reluctance to give up the doctrine of phlogiston, a kind of timidity on the score of that long-established and deeply-rooted opinion, prevented both Mr. Watt and Mr. Cavendish from doing full justice to their own theory; while Mr. Lavoisier, who had entirely shaken off these trammels, first presented the new doctrine in its entire perfection and consistency.*

All three may have made the important step nearly at the same time, and unknown to each other; the step, namely, of concluding from the experiment, that the two gases entered into combination, and that water was the result; for this, with more or less of distinctness, is the inference which all three drew.

But there is the statement of Sir Charles Blagden, to show that Mr. Lavoisier had heard of Mr. Cavendish's drawing this inference before his (Mr. Lavoisier's) capital experiment was made;† and it appears that Mr. La-

* It could scarcely be expected that Mr. Watt, writing and publishing for the first time, amid the distractions of a large manufacturing concern, and of extensive commercial affairs, could compete with the eloquent and practised pen of so great a writer as Lavoisier; but it seems to me, who am certainly no impartial judge, that the summing-up of his theory, (p. 333 of his paper,) here quoted p. 167, is equally luminous and well expressed as are the conclusions of the illustrious French chemist.—[NOTE BY MR. JAMES WATT.]

† In the letter which Sir Charles Blagden addressed to Professor Crell, and which appeared in Crell's *Analen*, for 1786, professing to give a detailed history of the discovery, he says expressly, that he had communicated to Lavoisier the conclusions both of Cavendish and Watt. This last name appears in that letter for the first time, in the recital of

voisier, after Sir C. Blagden's statement had been embodied in Mr. Cavendish's paper and made public, never gave any contradiction to it in any of his subsequent memoirs which are to be found in the *Mémoires de l'Académie*, though his own account of that experiment, and of what then passed, is inconsistent with Sir Charles Blagden's statement.*

But there is not any assertion at all, even from Sir C. Blagden, zealous for Mr. Cavendish's priority as he was, that Mr. Watt had ever heard of Mr. Cavendish's theory before he formed his own.

Whether or not Mr. Cavendish had heard of Mr. Watt's theory previous to drawing his conclusions, appears more doubtful. The supposition that he had so heard, rests on the improbability of his (Sir Charles Blagden's,) and many others knowing what Mr. Watt had done, and not communicating it to Mr. Cavendish, and on the omission of any assertion in Mr. Cavendish's paper, even in the part written by Sir C. Blagden with the view of claiming priority as against Mr. Lavoisier, that Mr. Cavendish had drawn his conclusion before April 1783, although in one of the additions to that paper reference is made to Mr. Watt's theory.

As great obscurity hangs over the material question at what time Mr. Cavendish first drew the conclusion from his experiment, it may be as well to examine what that great man's habit was in communicating his discoveries to the Royal Society.

A committee of the Royal Society, with Mr. Gilpin the clerk, made a series of experiments on the formation of nitrous acid, under Mr. Cavendish's direction, and to satisfy those who had doubted his theory of its composition, first given accidentally in the paper of January 1784, and afterwards more fully in another paper, June 1785. Those experiments occupied from the 6th December, 1787, to 19th March, 1788, and Mr. Cavendish's paper upon them was read 17th April, 1788. It

the verbal communications of the Secretary of the Royal Society, and is never mentioned by Lavoisier.—[NOTE BY MR. JAMES WATT.]

* Could Blagden's letter to Crell also have escaped Lavoisier's notice? —[NOTE BY MR. JAMES WATT.]

was, therefore, written and printed within, a month of the experiments being concluded.

Mr. Kirwan answered Mr. Cavendish's paper (of 15th January, 1784,) on water, in one which was read 5th February, 1784, and Mr. Cavendish replied in a paper read 4th March, 1784.

Mr. Cavendish's experiments on the density of the earth, were made from the 5th August, 1797, to the 27th May, 1798. The paper upon that subject was read 27th June, 1798.

The account of the eudiometer was communicated at apparently a greater interval; at least the only time mentioned in the account of the experiments is the latter half of 1781, and the paper was read January, 1783. It is, however, probable from the nature of the subject, that he made farther trials during the year 1782.

That Mr. Watt formed his theory during the few months or weeks immediately preceding April, 1783, seems probable.* It is certain that he considered the theory as his own, and makes no reference to any previous communication from any one upon the subject, nor of having ever heard of Mr. Cavendish drawing the same conclusion.

The improbability must also be admitted to be extreme, of Sir Charles Blagden ever having heard of Mr. Cavendish's theory prior to the date of Mr. Watt's letter, and not mentioning that circumstance in the insertion which he made in Mr. Cavendish's paper.

It deserves to be farther mentioned, that Mr. Watt left the correction of the press, and every thing relating to the publishing of his paper, to Sir Charles Blagden. A letter remains from him, to that effect, written to Sir Charles Blagden, and Mr. Watt never saw the paper until it was printed.†

* That the idea existed in his mind previously, is proved by his declarations to Dr. Priestley, cited by the latter; by his own assertions, p. 335 of his paper; and by the existing copies of his letters in December, 1782.—[NOTE BY MR. JAMES WATT.]

† The notes of Mr. James Watt formed part of the manuscript transmitted to me by Lord Brougham; and it is at the express desire of my illustrious fellow-member, that I have printed them, as a useful commentary upon his essay.—[NOTE BY M. ARAGO.]

DR. BLACK'S LECTURES.*

[From the *Edinburgh Review*.]

IN performing the duties of editor to the discourses of his departed friend, Professor Robison had peculiar difficulties to overcome. With a few exceptions, Dr. Black's lectures were left in a very disordered and imperfect state; generally written indistinctly upon scraps of paper; often in the form of notes or memorandums, from which he had spoken extempore; frequently consisting of references to the experiments that went on during the lesson.

To counterbalance these disadvantages, the editor possessed some very important qualifications and happy facilities. He had known Dr. Black most intimately for a long course of years; during which he had been, first, his favourite pupil, then his successor, and lastly, his colleague. He enjoyed the friendship of the distinguished circle of philosophers, among whom this great man, after achieving the most brilliant discoveries of modern times, happily and elegantly passed the quiet remainder of his days. From these friends, Mr. Robison obtained all the information and assistance that the nature of his office required. He had free access to every document which could enable him to furnish the

* Lectures on the Elements of Chemistry, delivered in the University of Edinburgh, by the late Joseph Black, M. D. &c., &c., &c. Now published from his MSS. by John Robison, LL.D., Professor of Natural Philosophy in the University of Edinburgh. .

public with an accurate transcript of these celebrated lectures, or to aid his own recollections in presenting a sketch of their author, and in completing a history of the steps by which his discoveries were made. By a coincidence, equally rare and fortunate, journals of Dr. Black's scientific pursuits were preserved from the time of his first application to speculative matters; and Mr. Robison has been enabled to supply some of the dates which were of importance, from his own recollection of incidents, casually set down.

“There are some in which he seems to have inserted every thing as it took his fancy, in medicine, chemistry, jurisprudence, or matters of taste; and I find others into which he has transferred the same things, but has distributed them according to their scientific connexions. In short, he has kept a journal and ledger of his studies, and has posted his books like a merchant. I have looked over these memorandums with some care, and have there seen the first germs of those discoveries which have at last produced such a complete revolution in chemical science. What particularly struck me, was the steadiness with which he advanced in any path of knowledge,—*nulla retrorsum*. Things are inserted for the first time, from some present impression of their singularity or importance, but without any allusion to their connexions. When a thing of the same kind is mentioned again, there is generally a reference back to its fellow; and thus the most insulated facts often acquired a connexion which gave them scientific importance.” Preface, p. xxii. xxiii.

Mr. Robison has performed the duty entrusted to him by his friend's executors, in such a manner as must entitle him not merely to their thanks, but to the lasting gratitude of the scientific world. He has presented us with a very full, and apparently a very accurate collection, of the most valuable parts of the lectures, as nearly as possible in the very words of the teacher. He has faithfully adhered to the arrangement of the course, except in two instances, where a slight change seems

to be perfectly justified by the convenience which attends it. His preface contains a clear and compendious account of the import of Dr. Black's discoveries, and a very interesting sketch of his life. In the foot-notes, he has occasionally added to the rich collection of facts and observations contained in the text, several valuable remarks and statements suggested by his own experience. In the more copious notes subjoined to each volume, he has introduced various discussions of the highest importance both to the elucidation of the general subject, and the establishment of leading points in the history of the science. Let our scientific readers consider, how much of all this consists in mere labour, unrepaid by the peculiar reward of genius; and let them remember that Mr. Robison's talents are as original as his acquirements are various and profound: they will then be able to estimate the extent of the obligations under which he has laid them by editing this valuable work.

It would be perfectly inconsistent with our plan, and far exceeding our limits, to analyze these lectures, or the commentaries of the editor, which, like the text, must necessarily be very miscellaneous. We shall confine ourselves to a few general observations on each of the two departments; and shall, in the first place, endeavour to make our readers acquainted with the illustrious man whose life and discoveries confer upon the present publication its chief interest.

Joseph Black was sprung from a Scotch family, transplanted first to Ireland, and then to France, the country which gave him birth. He spent, in Bordeaux and its vicinity, those years of infancy devoted by the constitution of human nature to imbecility, thralldom and ignorance, and extolled, by the general consent of mankind, as the season of genuine happiness. The biographer has wisely passed over the history of this blissful period, and preferred dwelling upon those scenes which display the ripened powers of the mind. After an account of the intimacy which subsisted between the amiable parents of the philosopher and the celebrated president Montesquieu, the narrative is pursued from the period of Dr. Black's removal to Belfast, in the twelfth

year of his age. He there received the rudiments of his literary education, and finished it at the University of Glasgow, the scene of his future discoveries. His attention appears to have been divided between the science which his natural bias led him peculiarly to cultivate, and those more general objects of speculation which enlarge the understanding, while they improve the taste. Although his application to these delightful pursuits was never very ardent, it was steady and vigorous. If he did not, like Pascal, Newton, M'Laurin, and various writers on lighter subjects, astonish the world by a premature display of talents, his want of those stronger passions, which lead to an early development of genius, ensured him the possession of a calm and immoveable judgment, a patient capacity of observation, and a modest distrust of theory,—the most essential characteristics of the inductive philosopher.

In the course of his studies, he does not appear to have entered deeply into the abstract sciences, either of mathematical or metaphysical truth. His taste led him rather to the contemplation of real and external objects; and he soon employed as much of his talents as he ever devoted to severe study, in the investigations of experimental philosophy. The physical discoveries of Sir Isaac Newton attracted his chief admiration; and, upon the unequalled models of inductive disquisition which the treatise of light contains, his scientific habits were happily formed. After he had, by his own discoveries, laid the foundation of a revolution in science, almost equal to the changes which his great master had effected, we find him steadily persevering in the same strict and chastened system of inductive logic, and freely acknowledging the sources of his skill.

“My acquaintance with him (says Mr. Robison) began at Glasgow in 1758, I being then a student in that University; and it began in a way which marked the distinguished amiableness of his disposition and behaviour. It was at the house of one of the professors, to whom I was telling the great entertainment I had received from the lectures of Dr. Robert Dick, Profes-

sor of Natural Philosophy, and how much I admired him as a lecturer. Dr. Black joined in the commendation: and then, addressing himself to me, questioned me a good deal about natural philosophy, so as to perceive what were the peculiar objects of my attention. His advices relative to my favourite study were so impressive, and given in a manner so unaffectedly serious and kind, that they are still as fresh in my mind as if of yesterday's date. I was a stranger to him, and not even his pupil; and he was prompted to take that pains with me, solely by the way in which he heard me speaking of the lectures of one whom he loved and esteemed. Gently and gracefully checking my disposition to form theories, he warned me to suspect all theories whatever, pressed on me the necessity of improving in mathematical knowledge, and gave me Newton's Optics to read, advising me to make that book the model of all my studies, and to reject, even without examination, every hypothetical explanation, as a mere waste of time and ingenuity." Preface, p. vii.

The profession of medicine, which Dr. Black chose from its consonance with the tenour of his favourite studies, was extremely unsuitable to his delicate constitution, and the amiably solicitous temper of his mind. The duties of his station as a physician, and of his three successive professorships, were, unfortunately for science, (we may add, for his own fame,) matters of such anxious care, as to distract much of his attention from the path of original investigation, which he had entered with the most splendid prospects of success. The doctrine of latent heat appears to have been early familiar to his thoughts. In the oldest parcels of his notes, Mr. Robison found queries relative to this point; and Dr. Black himself asserts, (vol. i. p. 156,) that he can scarcely remember the time when he had not some idea of the disagreement of the facts with the common doctrines of heat. The extracts from the memorandum-books given in these volumes, sufficiently prove, that, while a student, his ideas had been somewhat matured upon the subject. Before the year 1763, his whole experi-

ments and inquiries on the absorption of heat, were brought to a conclusion; and his inaugural dissertation, when he received a degree in 1754, contained an account of his other grand discovery—the nature of the alkaline earths, and the properties of fixed air. He removed from Glasgow to Edinburgh in 1766, and died in 1799. How great a part, then, of this most valuable life was spent in the mere exercise of professional duties! At an age when the bulk of philosophers are only beginning to strike out new lights, Black had closed his short career of brilliant discovery; entered upon the common task of a chemical teacher; limited his ambition to the simple explication of a science which he might have created anew; and left to his more ardent, or more fortunate successors, the glories of rearing a system, of which he had laid the firm foundations, and furnished the chief materials. We shall afterwards see, that they are charged with refusing to engrave his name upon the structure, and to bestow his portion of honour on him whose genius and ill fate had left them so ample a share.

In contemplating the intellectual character of this eminent person, we cannot fail to be delighted with the observation of that unity which seems peculiar to minds of the first order. An original genius is often to be found in all the departments of human excellence. But it is rarely, indeed, that we can discover one whose features are at once distinctly marked, and nicely blended; each different from the ordinary cast, and all animated by the same spirit. The most astonishing intellect that has ever been permitted to enlighten mankind, possessed this rare harmony in the very highest degree. Those qualities which distinguished the father of inductive science from every other philosopher, were equally conspicuous in each of his various exertions; and the pre-eminent dignity of his powers was sustained through all the thousand operations by which he enlarged the grasp of the human mind. It is in vain that we search every corner of the Newtonian writings, for some trifling proof that their author was, like ourselves, liable to the common intellectual failings of the species.

We are consoled by no glimpse of wavering steps, even on the most delicate ground; or hasty advances, where the footing is surest, and the prize most attractive; or careless examination, where the intermediate objects are most trivial; or relaxation, when the greatest obstacles have been surmounted; or intemperate triumph, when the most dazzling prospects are displayed. Each height is reached by the safest and the shortest path, with the smallest bustle; and the attainment is only valued as leading to some loftier eminence. Each position is alike marked by its distance from the ordinary level; by the nature of the works which secure it, and of the country which it commands. The chief characteristic of Newton, is the degree of superiority in which he towers above every other natural philosopher, so as to form a class by himself. But the kind of his excellence is also remarkable and uniform. The distance and dissimilarity of the objects which his discoveries enable us to compare, is not more astonishing, than the ease and simplicity of the means of comparison. The pleasure of contemplation, which forms the primary object of all abstract science, and which the view of those comparisons invariably bestows, is equalled by the practical importance of the consequences to which they may be applied. The enunciation of the proposition is not more unexpected, than the demonstration is flowing, and the corollaries useful. All those various investigations, too, are the easy and natural work of one great, simple mind, versatile in the direction of its efforts, but uniform in its mode of operation—not the attempts of an ordinary intellect, straining at universality by ambitious mimicry of different talents.

In these particulars, we cannot avoid observing a striking analogy between the philosophical genius of Black and that of Newton. None of this illustrious man's followers has so correctly seized the true spirit of inductive reasoning by which he has guided, or combined so happily the utmost simplicity of means with the accomplishment of the most difficult and important ends. In all Dr. Black's analytical inquiries, we perceive how much belongs to the mind of the observer—

how little is left to the trick and dexterity of the operator. By placing nature in new combinations of circumstances, he extorts from her (to use the language of Lord Bacon) some of her sublimest secrets: But these combinations are always simple and conclusive. He knows, too, that the ordinary combinations which we witness every hour, require only patient observation, to furnish the unbiassed reasoner with ample opportunities of generalization. Accordingly, in no scientific inquiries, since the date of the *Principia* and *Optics*, do we find so great a proportion of pure ratiocination, founded upon the description of common facts, but leading to the most unexpected and important results, as in the two grand systems of Black. This mode of investigating the laws of nature has various advantages of the highest consequence. It diminishes incalculably the chances of mistake, by precluding the use of complicated apparatus. It brings home to every one the evidence of the discoveries, and exposes the demonstration of each proposition to the most severe and universal scrutiny. It opens, to all who can observe and reason, the field of important inquiry, and raises the mind to the most general views of the constitution of the world.

The same happy turn of mind which placed the scientific investigations of Dr. Black so near the greatest discoveries that have ever been made by the species, was perceptible also in the elegance and ingenuity which it mingled with all his personal habits.

"I have already observed," says Mr. Robison "that when I was first acquainted with Dr. Black, his aspect was comely and interesting. As he advanced in years, his countenance continued to preserve that pleasing expression of inward satisfaction, which, by giving ease to the beholder, never fails to please. His manner was perfectly easy, and unaffected, and graceful. He was of most easy approach, affable, and readily entered into conversation, whether serious or trivial. His mind being abundantly furnished with matter, his conversation was at all times pertinent and agreeable: for Dr. Black's acquisitions were not merely those of a man

of science. He was a stranger to none of the elegant accomplishments of life. He therefore easily fell into any topic of conversation, and supported his part in it respectably. He had a fine, or accurate musical ear, and a voice which would obey it in the most perfect manner: for he sung, and performed on the flute, with great taste and feeling; and could sing a plain air at sight, which many instrumental performers cannot do. But this was science, Dr. Black was a very intelligent judge of musical composition: and I never heard any person express so intelligibly the characteristic differences of some of the national musics of Europe. I speak of Dr. Black as I knew him at Glasgow: After his coming to Edinburgh, he gave up most of those amusements. Without having studied drawing, he had acquired a considerable power of expression with his pencil, both in figures and in landscape. He was peculiarly happy in expressing the passions; and seemed, in this respect, to have the talent of a history painter. He had not had any opportunities of becoming a connoisseur; but his opinion of a piece of painting, or sculpture was respected by good judges. Figure, indeed, of every kind, attracted his attention;—in architecture, furniture, ornament of every sort, it was never a matter of indifference. Even a retort, or a crucible, was to his eye an example of beauty or deformity. His memorandum-books are full of studies (may I call them) of this sort: and there is one drawing of an iron furnace, fitted up with rough unhewn timber, that is finished with great beauty, and would not disgrace the hand of a Woollet. Naturally, therefore, the young ladies were proud of Dr. Black's approbation of their taste in matters of ornament. These are not indifferent things; they are features of an elegant mind, and they account for some part of that satisfaction and pleasure which persons of all different habits and pursuits felt in Dr. Black's company and conversation.

“I think that I could frequently discover what was the circumstance of form, &c. in which Dr. Black perceived or sought for beauty,—it was some suitableness or propriety; and he has often pointed it out to me, in things

where I never should have looked for it. Yet I saw that he was ingeniously in the right. I may almost say that the love of propriety was the leading sentiment of Dr. Black's mind. This was the first standard to which he appealed in all his judgments; and I believe he endeavoured to make it the directing principle of his conduct. Happy is the man whose moderation of pursuits leaves this sentiment in possession of much authority. Seldom are our judgments greatly wrong on this question; but we too seldom listen to them." Preface, p. lxvi. lxvii.

The following extract describes Dr. Black's merits as a Lecturer, with a truth and precision which every one will immediately feel who has had the happiness of receiving instructions from that eminent teacher. The sustained elegance and propriety which we have already taken notice of, as characteristic both of his original inquiries, and of his demeanour in the ordinary affairs of life, was equally conspicuous in this favourite line of exertion.

"Dr. Black now formed the firm resolution of directing his whole study to the improvement of his scholars in the *elementary* knowledge of chemistry. He saw too many of them with a very scanty stock of previous learning. He had many from the workshop of the manufacturer, who had none at all; and he saw that the number of such hearers must increase with the increasing activity and prosperity of the country: And these appeared to him as by no means the least important part of his auditory. To engage the attention of such pupils, and to be perfectly understood by the most illiterate, was therefore considered by Dr. Black as his most sacred duty. Plain doctrines, therefore, taught in the plainest manner, must employ his chief study. That no help may be wanting, all must be illustrated by suitable experiments, by the exhibition of specimens, and the management of chemical processes. Nice and abstruse philosophical opinions would not interest such hearers; and *any* doctrines, inculcated in a refined manner, and

referring to elaborate disquisitions of others, would not be understood by the major part of an audience of young persons, as yet only beginning their studies.

"To this resolution Dr. Black rigidly adhered, endeavouring every year to make his course more plain and familiar, and illustrating them by a greater variety of examples in the way of experiment. No man could perform these more neatly and successfully. They were always ingeniously and judiciously contrived, clearly establishing the point in view, and never more than sufficed for this purpose. While he scorned the quackery of a showman, the simplicity, neatness, and elegance, with which they were performed, were truly admirable. Indeed, the *simplex munditiis* stamped every thing that he did. I think it was the unperceived operation of this impression that made Dr. Black's lectures such a treat to all his scholars. They were not only instructed, but (they knew not how) delighted; and without any effort to please, but solely by the natural emanation of a gentle and elegant mind, co-operating, indeed, with a most perspicuous exhibition of his sentiments, Dr. Black became a favourite lecturer; and many were induced, by the report of his students, to attend his courses, without having any particular relish for chemical knowledge, but merely in order to be pleased. This, however, contributed greatly to the extending the knowledge of chemistry; and it became the fashionable part of the accomplishment of a gentleman." Preface, p. l. li.

One prominent feature in Dr. Black's character, Mr. Robison does not appear to have delineated with sufficient strength; we mean the want of passion. There can be no doubt that this defect, however much it may have contributed to the ease and calmness of his enjoyments, deprived his mind of that energy by which alone the greatest things are performed in the pursuits either of speculation or of active life. When we consider how short a period of time his original inquiries occupied, how carelessly he left his discoveries to be appropriated by others, how little progress he made in follow-

ing out those sublime ideas, by the help of which his followers have overturned and created systems; nay, how long an interval he frequently suffered to elapse between the conception and execution of some experiment which was to decide the truth of a favourite theory; we must be convinced that he felt little of the inspiration so necessary to the full success of those happy few who possess all the powers of philosophical investigation. This want of passion, or of ardour and energy, or, to give it the right name, this indolence, was conspicuous in all the particulars of Dr. Black's conduct. The discovery which he first made, was the last of being completed. He never could be induced to publish any account of it to the world, notwithstanding the constant attempts of his rivals to deprive him of the claim. He was at all times averse to publication, and fastidious, to an uncommon degree, in his judgments of his own compositions. When the *experimentum crucis* of his doctrine of latent heat occurred to him, he delayed making it for many months, because there happened to be no icehouse in the town where he lived. In extending this doctrine to the case of æriform fluidity, he remained for years satisfied with analogies and rough sketches of experiments, which he could at any time have performed with ease; and however little doubt he had reason to entertain of the result, he evinced none of that anxiety, which is so natural to a discoverer even on the least important points of his theory. After ascertaining the existence of fixed air, and determining some of its qualities, he delayed investigating its other properties, and pursuing the most obvious experiments on analogous bodies; until the field was occupied by others, who, with scarcely a spark of his truly philosophical genius, were enabled, by their superior activity, to make the most valuable discoveries. Nor can we avoid remarking how closely his propriety and correctness of character was connected with this freedom from passion, which always left his mind, as it were, disengaged, unabsorbed by any predominant enthusiasm, and at leisure to regard the most trivial con-

cerns. He was never, like Newton or Smith, known to be absent in society ; or thoughtless and playful in his hours of relaxation, like Hutton and Hume.

“ As Dr. Black,” (we quote the words of his near relation, Dr. Ferguson*) “ had never any thing for ostentation, he was, at all times, precisely what the occasion required, and no more. Much as he was engaged in the details of his public station, and chemical exhibitions, his chambers were never seen lumbered with books and papers, or specimens of mineralogy, &c., or the apparatus of experiments. Nor did any one see Dr. Black hurried at one time to recover matter which had been improperly neglected on a former occasion. Every thing being done in its proper season and place, he ever seemed to have leisure in store ; and he was ready to receive his friend or acquaintance, and to take his part with cheerfulness in any conversation that occurred. And let me remark, that no one ever with more ease to himself refrained from professional discussions of any sort, or conversation in which he was acknowledged superior,—or with less self-denial, in mixed company, left the subject of conversation to be chosen by others.”
Preface, p. lxviii.

His attention was awake, even to the mere trifles of life. His domestic concerns were regulated with an attention to minute circumstances, rarely to be observed in the household of a philosopher ; and the fortune which his admirable economy enabled him to amass (notwithstanding various diminutions that his income suffered from his liberal and friendly disposition,) was accurately bequeathed to his near relations, in shares proportioned to the degree which each individual possessed of his esteem. He was often heard to express anxiety with respect to the mode of his death, and to wish for a quiet departure from this world, without the evils of a long continued sick bed. It is singular how characteristic of the man,

* Mr. Robison has incorporated with the narrative contained in his Preface, several extracts from a biographical sketch of Dr. Black, drawn up by this eminent writer.

and how suitable to such feelings, this last scene actually proved.

“On the 26th November, 1799, and in the seventy-first year of his age, he expired, without any convulsion, shock or stupour, to announce or retard the approach of death. Being at table, with his usual fare, some bread, a few prunes, and a measured quantity of milk, diluted with water, and having the cup in his hand when the last stroke of his pulse was to be given, he had set it down on his knees, which were joined together, and kept it steady with his hand, in the manner of a person perfectly at ease; and in this attitude expired, without spilling a drop, and without a writhe in his countenance; as if an experiment had been required to show to his friends the facility with which he departed.”* His servant opened the door to tell him that some one had left his name; but getting no answer, stepped about half way towards him, and seeing him sitting in that easy posture, supporting his basin of milk with one hand, he thought that he had dropped asleep, which he had sometimes seen happen after his meals. He went back and shut the door; but before he got down stairs, some anxiety which he could not account for, made him return and look again at his master. Even then, he was satisfied, after coming pretty near him, and turned to go away; but again returned, and, coming quite close to him, he found him without life.” Preface, lxxiv. lxxv.

Such was the man, of whose lectures the volumes now before us contain a faithful transcript. They are, *therefore*, a most valuable acquisition, although we should allow them only the merit of a literary curiosity, a relic of the greatest inductive philosopher that has appeared since the days of Sir Isaac Newton, and, unfortunately, one of the very few monuments which his modesty and his indolence permitted him to leave. But this publication is highly important in another point of

* The first part of this extract is taken from the Memoir of Dr. Ferguson.

view—it contains the only history which we have of the discovery of latent heat, and a much more copious account of the discovery of fixed air than that which the author published during his life.

The former of these discoveries is, in our opinion, the most important in its consequences, and the most signal, with regard to difficulty, of any that has been made since the application of gravity to explain the laws of planetary motion. It differs from all the others with which we are acquainted, in this material respect, that it is separated, by a vast interval, from the previous steps of our knowledge. By how many insensible gradations did we arrive at the doctrine of the composition of water? First, the inflammation of certain vapours was observed—then, the discovery of fixed air having taught philosophers to examine the properties of certain elastic fluids, one of these was found to differ from the rest in being inflammable. It was afterwards remarked, that this air, when slowly burnt, produced moisture upon a cold body held over the flame: fixed air was, by some, thought to be produced in the same process; and reasoners inferred from hence, that the water had been contained in the inflammable air. But others varied the experiment, and burned the air in close vessels—moisture was still formed, and accurate observation showed that no new aëriform product resulted from the combustion. A new species of air having been discovered, much better calculated than common atmospherical air to support flame, the combustion of inflammable air was tried with this new species, and it was found to be extremely rapid. The combustion being performed in close vessels, the inaccuracy of the experiment gave rise to various errors; but water was always found to be produced—and some ingenious men, particularly Mr. Watt, reasoning from all these facts, concluded that this fluid is a compound of the two airs, deprived, by their union, of a considerable portion of their latent heat, the quantity (*viz.*) which is necessary for maintaining the elastic aëriform state. This idea was verified by the accurate experiment of Mr. Cavendish, in which the quantity of water

formed was compared with the quantities of the airs burnt—and the French chemists added new proofs of the proposition by the analytical process. This chain of investigation is evidently so long, and of such slow formation, that we cannot, with any degree of correctness, appreciate the comparative merits of those who severally extended it—nor point out the particular link upon which the grand discovery hangs. And the same distribution of praise is strictly proper in almost all the other instances of successful physical research. Even the composition of light was only unfolded by degrees, and appears to have been wonderfully nearly discovered by Grimaldi and others, with whose works Newton must have been acquainted. There are numerous proofs of such anticipations contained in the writings of Hooke and Mayow, as our chemical readers well know. Mr. Robison has, in his notes to these lectures, pointed out several new and remarkable instances, more particularly from the works of the former.* The same observations may be extended to the most important discoveries in abstract science. The method of fluxions itself may be traced through a long succession of less elegant and less general inventions for finding quadratures and subtangents.

But two great physical discoveries seem to have followed this *law of continuity*, in so slight a degree, that they may almost be allowed to form a case of exceptions to its operation. These are, the universality of gravitation, and the combination of heat. As, before the time of Sir Isaac Newton, the influence of weight was only known by the falling of heavy bodies, all ideas of the attraction of gravitation were connected with this particular line of its operation—the only language in which men had ever learnt to express them-

* Note 13. Vol. I. contains a very interesting account of Hooke's theory of combustion. Its similarity to the antiphlogistic doctrine is truly singular—and Mr. Robison is, so far as we know, the first writer who has remarked it. In p. 537, he says that he only observed it in 1798; but there must be some mistake in this; for he published a notice of it in his valuable article *Pneumatics*, § 371, *Encyclopædia Britannica*, which appeared in the year 1795.

selves upon the subject, was borrowed immediately from the particular case of vertical descent, and confined to the very limited sphere of its occurrence. In like manner, before the time of Dr. Black, all the knowledge we had of the matter, or the motion of heat, was intimately connected with the idea of a substance, or a state, by which the sense of touch is affected in a specific manner and the dimensions of bodies sensibly increased. The phlogiston of Stahl was evidently no inference from induction, even as modified and altered by his followers—neither was it the hypothesis of any peculiar qualities in the matter of heat; it was the assumption of a substance, different from every other with which we are acquainted, endued with qualities repugnant to the universal properties of matter, and capable of producing every effect which the inventors might wish to explain. Phlogiston was indeed denominated the matter of heat and light—but it might as well have been called the reguline principle; and then, instead of saying that the escape of the matter of heat and light causes the calcination of metals, the followers of Stahl would have said, that the escape of the reguline principle causes the combustion of inflammable bodies. It is evident, that no specific effect, no subordination to the laws of chemical affinity, was ever ascribed to the substance which affects our sense with the feeling of heat, until Dr. Black, from the most faithful and cautious examination of obvious facts, found, that this substance is capable of uniting with bodies, so as not to affect our senses with the peculiar feeling of heat, and yet to produce upon those bodies the most important changes—in the same manner that an acid, when combined with an alkali, ceases to taste sour, while it destroys the acidity of the alkali, and forms a third body, possessing the noxious qualities of neither. This physical law, discovered by the strictest induction, is applicable to the explanation of an infinite number of phenomena—its operations actually occur in almost every chemical experiment, and its influence is perceived in all the great processes of nature. For a most interesting detail of the steps by which Dr. Black was led to the knowledge of it, we refer our readers to

the first volume of these lectures. This narrative appears to us a model of philosophical writing, as well as of induction—making allowance for the style of conversation, which is obviously adopted as most suitable for a public elementary lecture.

The other great discovery of Dr. Black (the nature of the alkaline earths, and of fixed air) was scarcely less important in its consequences to chemical science, than the one which we have been contemplating. The account of it contained in these volumes, differs considerably from that which the author himself published. It dwells more minutely upon the steps of the investigation, and (with the exception of a few remarks upon borax, apparently copied from the treatise on magnesia alba and quicklime,) it is composed in a style much less careful and finished than that which the Doctor seems to have employed when he wrote for publication.

Our readers will derive some entertainment from the comparison: and we shall here give, as a specimen of the manner which distinguishes the whole of these lectures, the following passage from the history of the discovery of fixed air. It unites, with great simplicity of diction, an exemplification of Dr. Black's inimitable simplicity and ingenuity in the contrivance of experiments.

“In the same year in which my first account of these experiments was published, namely, 1757, I had discovered, that this particular kind of air, attracted by alkaline substances, is deadly to all animals that breathe it by the mouth and nostrils together—but that if the nostrils were kept shut, I was led to think that it might be breathed with safety. I found, for example, that when sparrows died in it in ten or eleven seconds, they would live in it for three or four minutes when the nostrils were shut by melted suet. And I convinced myself, that the change produced on wholesome air by breathing it, consisted chiefly, if not solely, in the conversion of part of it into fixed air. For I found, that by blowing through a pipe into lime water, or a solution of caustic alkali, the lime was precipitated, and the alkali was rendered mild. I was partly led to these experiments by some observations of Dr. Hales, in which

he says, that breathing through diaphragms of cloth, dipped in alkaline solution, made the air last longer for the purposes of life.*

"In the same year, I found that fixed air is the chief part of the elastic matter which is formed in liquids in the vinous fermentation. Van Helmont had indeed said this, and it was to this that he first gave the name *gas silvestre*. It could not long be unknown to those occupied in brewing or making wines. But it was at random that he said it was the same with that of the Grotto del Cane in Italy, (but he supposed the identity, because both are deadly :) for he had examined neither of them chemically, nor did he know that it was the air disengaged in the effervescence of alkaline substances with acids. I convinced myself of the fact, by going to a brew-house with two phials, one filled with distilled water, and the other with lime-water. I emptied the first into a vat of wort fermenting briskly, holding the mouth of the phial close to the surface of the wort. I then poured some of the lime-water into it, shut it with my finger, and shook it. The lime-water became turbid immediately.

"Van Helmont says, that the *dunste*, or deadly vapour of burning charcoal, is the same gas silvestre—but this was also a random conjecture. He does not even say that it extinguishes flame; yet this was known to the chemists of his day. I had now the certain means of deciding the question, since, if the same, it must be fixed air. I made several indistinct experiments, as soon as the conjecture occurred to my thoughts; but they were with little contrivance or accuracy. In the evening of the same day that I discovered that it was fixed air that escaped from fermenting liquors, I made an experiment which satisfied me. Unfixing the nozzle of a pair of chamber bellows, I put a bit of charcoal, just red hot, into the wide end of it, and then quickly

* In the winter of 1764-5, Dr. Black rendered a considerable quantity of caustic fossil alkali mild and chrySTALLINE, by causing it to filtre slowly by rags, in an apparatus which was placed above one of the spiracles in the ceiling of a church, in which a congregation of more than 1500 persons had continued near ten hours.—*Editor*.

putting it into its place again, I plunged the pipe to the bottom of a phial, and forced the air very slowly through the charcoal, so as to maintain its combustion, but not produce a heat too suddenly for the phial to bear. When I judged that the air of the phial was completely vitiated, I poured lime-water into it, and had the pleasure of seeing it become milky in a moment. Vol. ii. p. 87, 88.

We cannot easily imagine a more interesting narrative—it reminds us of Montucla's admirable and animating account of the Torricellian experiment, with this essential difference, that here the narrator was himself the performer of the action.

The following passage, from the concluding discourse on heat, may serve as an example of Dr. Black's powers of description; and we cannot help regretting, that these volumes do not contain also the lecture in which he was wont (unnecessarily, indeed, but with great force of invective) to expose the manifold absurdities of Meyer's *acidum pingue*.

“It is plain, that not only all animal and vegetable life, but that the whole face and appearance of nature, the very form and powers of the elements themselves, depend upon this limited action of heat.—There are none of the elementary bodies with which we are better acquainted than water. Let us attend a little to the powers and qualities by which it acts its part in this system of beings. We all admire its pure transparency in a spring; the level and polished surface with which it reflects objects that are on the banks of a lake; the mobility with which it runs along the channel of a brook, and the incessant motion of its waves in a stormy sea. But when viewed with a philosophical eye, it appears much more an object of admiration. The same water which, under its usual form, is such a principal beauty in the scene of nature, is employed in her most extensive operations, and is necessary to the formation of all her productions. It penetrates the interior parts of the earth, and appears to assist in the production of various

minerals, stones, and carths, found there, by bringing their different ingredients together, and applying them to one another properly, that they may concrete. We know it arises in vapours from the surface of the ocean, to form the clouds, and to descend again in rain upon the dry land, and give origin to springs, rivers, and lakes, or, upon proper occasions, to form deep snow, which protects the ground and vegetables from the intense and mortal cold to which some parts of the world are exposed; and, after it has performed this useful office, it readily yields to the heat of summer, and returns to a state in which it serves the same purposes as rain. By its fluidity and tenuity, it penetrates the soil, and the seeds of plants which that soil contains. These it causes to swell and germinate into plants, which depend on water for support. It passes with freedom and ease through all their minutest tubes and vessels, and carries with it materials necessary for nourishment and growth, or changes its appearance so as to become part of the plant. There is no plant or vegetable substance, that does not contain in its composition a large quantity of water, easily separable from it. The hardest woods contain a great deal. The softer and more succulent parts of vegetables are almost totally composed of it. Even the oils and resinous substances can be resolved in part into water. It is plainly as necessary to the animals, and is found to be as copious an ingredient in the composition of their bodies, and of all the different parts of them.

“These are the numerous and extensive uses of this beautiful element. But, in this succession of forms and operations which it undergoes, you will perceive that it is set in motion, and adapted to these ends, by the nice adjustment and gentle vicissitudes of heat and cold, which attend the returns of day and night, and summer and winter; and that even the *form*, under which it and the other elements play their parts, depends on the limited action of heat. Were our heat to be diminished, and to continue diminished, to a degree not very far below the ordinary temperature, the water would lose its fluidity, and assume the form of a solid hard body, totally unfit for the numerous purposes which it serves

at present. And, if the diminution of the heat were to go still farther, the air itself would lose its elasticity, and would be frozen to a solid useless matter like the water—and thus all nature would become a lifeless, silent, and dismal ruin. Such being the important part allotted to water, in the magnificent series of natural operations, in consequence of the qualities communicated to it by heat, all its properties become interesting objects of contemplation to a sensible heart. That peculiarity by which the expansion and contraction of water by heat is distinguished from the same effect on other substances, I mean its irregularity between 32° and 40° of Fahrenheit, naturally attracts attention. Even this seemingly trifling distinction has been shown by Count Rumford to have a mighty effect in rendering our habitation more comfortable.

“On the other hand, were the heat which at present cherishes and enlivens this globe, allowed to increase beyond the bounds at present prescribed to it—beside the destruction of all animal and vegetable life, which would be the immediate and inevitable consequence, the water would lose its present form, and assume that of an elastic vapour like air; the solid parts of the globe would be melted and confounded together, or mixed with the air and water in smoke and vapour; and nature would return to the original chaos.” Vol. i. p. 245—247.

Of the conversation style, in which these lectures are for the most part written, we may remark, that although it usually possesses the advantages of plainness and fluency, yet, being adapted to the tones of his voice, it is very apt, when read over by a third person, to be deficient in perspicuity—and being less premeditated, it is scarcely ever equal in precision to a good written style. Its want of elegance is a defect of much less consequence; but all these circumstances must conspire to impair the effect of this work, unless the occasion of its composition be kept in view.

As a system of chemical instruction, the lectures of Dr. Black possess very peculiar merits. Although they

are, in many important respects, of necessity far behind the more recent systematical works upon this subject, they may fairly be admitted to contain the most accessible store of information which persons ignorant of the science can at present command. They are delivered, as much as possible, in the analytical mode. They take for granted no previous acquaintance with science in the learner; and they require, less than any work which we know, the assistance of apparatus. Dr. Black's manner of introducing the newly discovered substances, has, indeed, no great appearance of systematic arrangement; but it should be remembered, that an elementary treatise has other objects in view, than the attainment of that fair outside which forms the chief attraction of philosophical systems. After a person, wholly ignorant of science, has studied chemistry in these volumes, he may have occasion for some such work as Lavoisier or Fourcroy, in order to digest and arrange the knowledge he has picked up. But, we believe, every one the least conversant with the matter, will admit the impracticability of initiating an ignorant person into the science, merely by the assistance of those elegant and curiously systematic authors. It is true, we have sometimes felt inclined, in reading this work, to suspect Dr. Black of too great contempt for the synthetic form of instruction. Upon this important point, however, his own arguments, as he delivered them in conversation with Dr. Hutton and Mr. Robison, have been preserved—and we very willingly transcribe them, as containing a full and plain statement of the principles on which the whole course was constructed. Mr. Robison had expressed a very favourable opinion of Lavoisier's sketch of a scientific arrangement, and had alluded to the happy train of synthetic deduction which it enabled that philosopher to carry through the whole chemical history of bodies—

“This,” said Dr. Black, “is the very thing I dislike it for. Chemistry is not yet a science. We are very far from the knowledge of first principles. We should avoid every thing that has the pretensions of a full sys-

tem. The whole of chemical science should, as yet, be analytical, like Newton's Optics; and we should obtain the connecting principle, in the form of a general law, at the very end of our induction, as the reward of our labour. You blamed, and in my opinion, justly, De La Grange's *Mechanique Analytique*, for being the very opposite to a real analytical process; for adopting as the fundamental proposition, as a first principle, a theorem, which, in fact, is nothing more than a sagacious observation of an universal fact, discoverable indeed in every mechanical phenomenon; but still not a principle, but the mathematical and not the physical result of all our inductions. This is not a fundamental theorem, fit for instructing a novice in the science, but for adepts alone. The case is the same in chemistry.

“But this is not the greatest fault in the arrangement which sets out from the constitution of the atmosphere. In order to get the proofs on which the validity of this first principle must entirely rest, we must fall to work with a number of complex, very complex substances, of which we know nothing, and whose modes of action are among the most mysterious things in chemistry: and the conclusions which we must draw, require a steadiness and contention of thought which very few possess,—which a beginner in philosophical investigation cannot possibly possess. It is by no means fair to appeal to a Lavoisier, a Cavendish, or a Berthollet, or other great chemists, for the clearness of the evidence. They are not the proper judges. Lay it before a sensible metallurgist, ignorant of chemistry. Ask this man whether he sees the incontrovertible force of the proof. When I take the matter in this light, I affirm, that even to a philosopher, the proofs of the fundamental propositions which have been acquiesced in by the authors of this arrangement, are very scanty, very slight, and very refined. This is a fault in a system, published for the instruction of the ignorant—and, in the present day, it is a very great fault. There is just now a rage for system,—for complete systems. We have got such a high conceit of our knowledge, that we cannot be pleased with a system which acknowledges any imperfection—it must

not leave one open link—it must not leave any thing unexplained. And I see it always happen, that if the application of a system to the explanation of phenomena be very comprehensive, leaving no blanks, and if the explanation have some feasibility, this catches the fancy—it dazzles the understanding. Nay, we think it impossible that a principle that is false can tally with so many phenomena. This seeming coincidence is considered as a proof of its validity; and we are no longer solicitous about the *direct* proofs adduced in the beginning. I have often heard such arguments for what I knew to be great nonsense. This kind of authority accruing to a theory from its specious and extensive application to phenomena, is always bad—and, with mere beginners in philosophy, it is doing them an irreparable hurt. It nourishes that itch for theory; and it makes them unsolicitous about the first foundations of it—thus it forms in their minds the worst of all philosophical habits.

“I am resolved to go on in a very different way. I subscribe to almost all Mr. Lavoisier’s doctrines; and I will teach them all. And I affirm that I shall teach them with an impression of their truth, which his method can never make. My students shall get all these doctrines piece-meal; every one of them by steps which shall be quite easy and confident, because they shall be acquainted with every substance before I employ its phenomena as proofs. Each of Mr. Lavoisier’s doctrines shall arise in course, as a small and obvious addition to the properties of some substance already known. Then I shall carry the student back, and show him that the influence of our new discovery extends also to those substances which we had been considering before. Thus, all the doctrines will be had easily, familiarly, and with confidence in their truth.

“I even think that this method will be more pleasant,—the novelties, or reformations, being, by this method, distributed over the whole course. And it will ~~have~~ yet another advantage—it will make the student acquainted with the chemistry of former years, which is far from being unworthy of the attention of a philo-

sopher. Newton, Stahl, Margraaf, Cramer, Scheele, Bergmann, were geniuses not below the common level. But the person who learns chemistry by Lavoisier's scheme, may remain ignorant of all that was done by former chemists, and unable to read their excellent writings.

"I do not find that my old arrangement needs much change: Some I will make,—chiefly in the order in which I treat the inflammable substances and the metals."

We have already mentioned, in general terms, the great additional value which Mr. Robison's notes confer upon this publication. Besides a variety of curious and original chemical facts, they illustrate, by several very important documents and acute reasonings, the history of Dr. Black's discoveries. They answer the demand which was long ago made by Mr. Nicolson, that some contemporary author should adjust the claims of the several philosophers who have borne a part in establishing the doctrine of latent heat.* They prove to a demonstration, that the undivided honour of this grand discovery is due to the author of these lectures, whose amiable and dignified modesty prevented him from taking the necessary steps to secure his own claims. The following statement of the attempts that have been made to rob him of his just fame, presents no very pleasing picture of the philosophical character; and we are almost inclined to hope, that Mr. Robison, from whom our authority is derived, has been mistaken in his decisions. We feel it our duty, however, to give the circumstances to the public as he has detailed them; promising that we are sorry we can see no immediate reasons for doubting his accuracy, while we rely most implicitly on his veracity and candour.

Dr. Black never published his own account of the discovery, but he gave it every year after 1760, in his lectures, to very numerous classes of students from va-

* Translation of Fourcroy, 27, sect. of the valuable note to P. 1. ch. 5. § 2.

rious parts of Europe. It is proved, from his note-books, as well as from the concurring testimony of Messrs. Robison and Watt, that he completed this discovery, as far as regards aqueous fluidity, between the years 1754 and 1757. We have already remarked, that he immediately extended it to the case of aëriform fluidity, even before he had actually performed the experiments by which the application is illustrated in detail. Among his pupils, Dr. Black had many gentlemen of Geneva; particularly a M. Chaillet, in 1763, and a Dr. Odier, who corresponded with M. De Luc, and communicated to our countrymen several of that gentleman's meteorological observations. A Swedish gentleman of the name of Willems, or Willemson, (from Stockholm,) was also much in the company of Dr. Black and his friends, about the year 1768. He was wholly occupied with chemical studies. From none of these students was the slightest hint ever obtained, that a doctrine in any degree resembling that of latent heat, had been known in Geneva or Sweden.

While the communication between this country and those parts was thus constant, manuscript copies of Dr. Black's lectures were in very general circulation among his students. They were even sold at a moderate price; and they contained accounts of his discoveries, if not altogether correct, at least abundantly copious for all the purposes of plagiarism. In 1770, a surreptitious publication of them was made by a London bookseller, under a general title; and this work gave a very distinct statement of the leading parts of the doctrine, with a full acknowledgment that Dr. Black was the discoverer. In 1772, Mr. Wilcke of Stockholm read a paper to the Royal Society of that city, in which the absorption of heat, by melting ice, is described; and in the same year, M. De Luc of Geneva, published his *Recherches sur les modifications de l'Atmosphere*, in which the doctrine is, with much less accuracy, employed to explain some meteorological facts.

Our readers will probably have anticipated the conclusion which this statement of circumstances forces us to draw,—that both the one and the other of these gen-

tlemen, in all probability, owed their knowledge of the absorption of heat to the diffusion of Dr. Black's discovery, through the medium of his lectures. But the subsequent conduct of M. De Luc deserves our farther attention; and leaves as little doubt, with respect to his culpability, as can exist upon a question of this sort.

About the year 1782, Dr. Black was informed, that M. De Luc earnestly wished to become the editor of his observations upon latent heat, in order to secure Dr. Black's claims to the discovery, from the attempts which were continually made by others to appropriate it. In consequence of repeated solicitations, Dr. Black gave his friend Mr. Watt permission to communicate the leading points of his theory, and instructions to perform the experiments before M. De Luc. Neither the Doctor nor his friends had now the smallest anxiety upon the subject: they trusted in the promise of the Genevese philosopher, and expected to see in his great work, a full vindication of the claims which he had anxiously volunteered to defend. The publication at last arrived; and the mode of defence was somewhat novel. It consisted in a refutation of the claims urged by others, and an assertion, that the discovery of latent heat was entirely M. De Luc's own, Dr. Black being only allowed the merit of having first *attempted* to measure the exact quantity of absorption in the particular case of aqueous fluidity. Mr. Watt then wrote a letter to M. De Luc, containing a full explanation of Dr. Black's discovery, and insisted that this should be published in the next volume of the work. It appeared accordingly; but was accompanied only by an acknowledgment of the satisfaction which M. De Luc received, from learning that his own system had so able a defender as Dr. Black; a circumstance, he adds, which will give him new confidence in the doctrine.

From the foregoing statement, it appears, that M. De Luc published a work, containing a few crude ideas on the combination of heat; that he afterwards became better acquainted with the subject; that he formed a design to pass for the author of the doctrine, by completing his knowledge of the theory, and twisting his

former vague statements into some kind of similarity ; that, for this purpose, he applied to the man whom he knew to be the discoverer, and obtained, from him, a full account of the matter, under the pretext of defending his claim against others ; that, instead of fulfilling his promise, he only refuted the claims of those others, in order to bring forward his own ; converted the documents which he had procured, to his own use ; and concluded by politely laughing at the person whom he had thus defrauded. Such is the amount of the impression made by Mr. Robison's narrative, in the eighth note to the first volume. We wish that some friend of the Genevese philosopher could step forward to clear him from so foul a charge. We are willing to hope, that his conduct may be explained in a way consistent, at least, with the belief of his honesty ; for who can hesitate to pronounce, that the conduct here imputed to him, would have been deemed common imposture, if avarice, not vanity, had been the motive, and money, not fame, the end ?

Mr. Robison has incorporated with the text of these Lectures, vol. II. p. 245, some very curious observations upon the conduct of Lavoisier and his associates, both towards Dr. Black, and in the establishment of their new chemical system. We rejoice that this subject is fairly brought before the public ; and, on whichever side the decision may finally be given, the history of the science, as well as the political history of the times, is likely to be illustrated by the discussion. That the French chemists formed themselves into a junto for the propagation of their system ; that, like all juntas, they delivered their doctrines with an authoritative tone, highly indecorous in matters of science ; and that they even displayed somewhat of a spirit of persecution towards those who, from ancient habits, or from a predilection of their own new theories, refused their assent to the antiphlogistic doctrines, are facts which cannot be disputed. As little can it be denied, that the Parisian philosophers, animated, like all similar associations, by an *esprit de corps*, and mingling with this, very strong national partialities, arrogated to themselves the merit of every important

discovery, nay, of all most all the detached observations, which had been made in any part of Europe, during the latter half of the eighteenth century. Now, Mr. Robison requires us to go a step farther, and to admit that the motive for changing the nomenclature may be found in the same corporation and national spirit,—in a desire to obliterate the remembrance of every thing which did not owe its origin to the associated academicians of France,—in the same combination of innovating phrenzy, and puerile vanity, which produced the new calendar and metrology. We confess our disposition to question this, at least in the extent to which it is here pushed. No one can deny that the love of system had risen to a very great height in France, at the time of the innovations now alluded to; and it would appear, that as much of the calendar and metrology as is analogous to the nomenclature, owed its origin to this spirit of systematizing and classifying all the objects of our contemplation. Instead of blaming the chemical language for its resemblance to the other changes, we are inclined to laugh at the pedantry of its authors, who could overlook the essential distinction between the two cases, foolishly think of giving new names to the ideas of most ordinary recurrence in common life, and attempt suddenly to alter the language and the habits of the vulgar, for the pleasure of a useless uniformity. It cannot be doubted, that political views mingled with this love of system in preparing the change of the calendar; perhaps those views were the chief inducement to its adoption. But it should be remembered, that mere innovation, however sudden, in matters purely speculative, is liable to no one of the manifold objections which are so decisive against all sudden political changes, however specious. And in this most essential particular, the two cases are exactly opposed to each other:—that the new nomenclature was adopted, after a series of the most beneficial and fundamental changes had been effected upon the whole science of chemistry; while nothing called for the new calendar, but the most destructive revolution which the violence and folly of mankind ever brought about. The dogmatical spirit, indeed, with which the new nomenclature, and in ge-

ral, the new system was promulgated, had a tendency to obliterate much very valuable information, contained in the writings of the elder chemists: and we conceive that the present publication, if it served no other end, would be highly important as a collection of things not to be met with in the works of the new school.

Mr. Robison, among the observations to which we are now alluding, introduces a fact, upon the authority of Professor Lichtenberg of Gottingen. We give it to our readers as an amusing instance of that universal *charlatanerie* (the word cannot be translated by a people so destitute of the thing) which renders the French national character the least *respectable* of any of the civilized world. When the Parisian chemists, it seems, had furnished their grand experiment on the composition of water, they held a sort of festival, at which Madame Lavoisier, in the habit of a priestess, burnt Sthal's *Fundamenta* on an altar, while solemn music played a *requiem* to the departed system. The German Professor remarks, that if Newton had been capable of such a childish triumph over the *vortices* of Des Cartes, he could never be supposed the man who wrote the *Principia*; and Mr. Robison most justly adds, that if Newton or Black had so exulted over Des Cartes and Meyer, their countrymen would have concluded they were out of their senses.

The injustice of Lavoisier's behaviour to Dr. Black, has perhaps been somewhat overrated by our author. He attempted, indeed, to conceal the very name of the discoverer of latent heat, in his papers upon that doctrine. This appears to have been his mode of proceeding on all such occasions. He seems to have thought, that the variation of an experiment, or the farther prosecution of an idea, gave him a right of property in the whole subject. But we can scarcely consider his well known letter to Dr. Black as very irrefragable evidence of duplicity, when we reflect on the unmeaning complimentary style which all Lavoisier's countrymen kept upon every occasion. Dr. Black was perhaps as entitled to interpret the expressions of that letter and ^{and} ^{and} a profound respect for his original genius, as he

would be to infer affection from the ordinary beginning, or submission from the conclusion of 'the less verbose epistolary effusions of his own countrymen. We must refer our readers, however, to the "observations" themselves for a full statement of the facts upon which Mr. Robison's remarks are founded. They certainly throw very considerable difficulties in the way of those who may be inclined to defend the French philosophers.*

The discussions which Mr. Robison's notes contain upon various points of modern chemistry, are of inestimable importance to the student of that science. They draw his attention towards the weak parts of that beautiful theory into which the French philosophers have expanded the conclusions sanctioned by experiment; and suggest to him at every step, the difference between the unsupported and the unquestionable positions of the system. In point of fairness and ingenuity, these discussions are indeed superior to any with which we are acquainted. The new theory has never yet been treated with so much candour and impartiality. Mr. Robison is, in fact, only an adversary to the doctrines which are not warranted by induction, or are

* The conduct of Fourcroy, and of one or two other chemical writers, not immediately engaged in the original inquiries which led to the new system, has been much more fair towards Dr. Black. Fourcroy, in particular, has uniformly mentioned his name with the greatest respect, and has unequivocally admitted his claims to both of the grand discoveries which place him at the head of the modern chemists. See Fourcroy's careful enumeration of the important benefits conferred upon the science by the discovery of fixed air, *Elem. of Chemistry & Nat. His.* vol. I.; also *System des Connaissances Chimiques*, vol. I. p. 13.; *Ibid* p. 28, 49. He fixes the date of the discovery of fixed air, by Dr. Black, in 1755 or 1757—and the repetition of his experiments, by Lavoisier, in 1771 and 1772; vol. I. p. 36. From the unfortunate circumstance of Dr. Black never having published any account of his other great discovery, we cannot expect that his claim to it should be adjusted with equal precision. But the same author (vol. I. p. 40.) gives a very clear testimony in favour of our countryman upon this point also. In enumerating the subjects of Lavoisier's chemical memoirs, he mentions one as having been written by that author, in 1777, on the combination of the matter of heat, with the evaporable fluids, and the formation of elastic fluids; and adds, "These ideas, a long while before disseminated by Black, were still little known in France, and facilitated to Lavoisier the introduction of all his other data."

inconsistent with known facts—and we shall now offer a few observations upon those doctrines, not as a specimen of what our author has given, but as a caution to our readers against that implicit confidence in the universal truth of the antiphlogistic theory, which is derived from an unphilosophical carelessness about the facts, and a predetermination to learn the system synthetically.

Lavoisier and his followers maintain, that the light and heat extricated during the combustion of inflammable bodies, come entirely from the oxygenous gas. Now, to pass over the very weighty objections arising from the deflagration of nitrous salts, objections which have only been got rid of by the most gratuitous explanations, how does it happen that the union of many inflammable bodies, as sulphur and iron, sulphur and lead, &c. produces an ignition (*i. e.* an emission of light and heat) as violent as the union of the same inflammable bodies with oxygen? Is it consistent with the most obvious principles of induction, to attribute the light produced in cases of combustion entirely to the oxygenous gas, when the same bodies are found, in cases of union without that gas, to give out such quantities of light? Light, indeed, attracts oxygen from bodies, and contributes to give it the gaseous form. But the union of light with inflammable bodies is a fact fully as unquestionable, and entitles us as positively to conclude, that part, at least, of the light emitted in combustion comes from them.

Besides, various instances may be given of bodies confessedly incapable of forming any union with oxygen, giving out light, when heated to a certain point. Salts, and earths, and combinations of the two, as glass, are easily made red, and even white hot, without any oxydation, or any change whatever of their properties, except the expulsion of moisture, and other volatile ingredients in their composition. Other bodies, capable of uniting with oxygen at a high temperature, appear capable of being ignited by a lower degree of heat. Thus, linen cloth, when exposed to a heat somewhat higher than that of boiling water, seems, in the dark, to

be covered with a blue lambent flame, and yet, when examined, shows no symptoms whatever of oxygenation; for it is not in the slightest degree decomposed; and there is no instance of such heterogeneous bodies being oxydated entire.

How does it happen, that a body, admitted to be acid, should contain no oxygen? The prussic acid is this body. And how comes it, that water, which is so highly oxygenated, has no properties of an acid? To say, as the followers of Lavoisier have done that hydrogen is not an acidifiable base, is exactly to state the difficulty in another form of words.

How is the deflagration of water, in the following experiment, accounted for, upon any principle in the new theory? If sulphuric acid and oxymuriate, either of potash or soda, rendered as dry as possible, are mixed together, a red and fuming liquor is formed, having somewhat of a nitrous smell, but containing no nitrous acid or nitrous gas. Let a drop of water be projected upon this liquor while the red colour remains, it instantly deflagrates, with a slight explosion. This explains the experiment of triturating sulphur with oxymuriates, and of the explosions sometimes found to attend the mixture of sulphuric acid with those salts, when in a moist state. But how is the water first decomposed, and then recomposed? We can find no explanation of this, even in the doctrine of predisposing affinities, invented for the purpose of overcoming all difficulties.

When a certain degree of heat, without light, is applied to many inflammable bodies, they are vaporized, without oxygenation, decomposition or flame. Apply a lower temperature, with light, and the vapour burns. Yet, what effect should the presence of light produce, according to the theory of Lavoisier?

A multitude of other facts might be mentioned, all tending to show how unfounded that confidence is which the followers of the new chemistry have reposed in the universality of its powers of explanation. Mr. Robison, who states a variety of such facts, acquits Lavoisier of the charge of an unphilosophical readiness to generalize,

which has been brought against his followers. But it must be acknowledged, that Lavoisier himself was too fond of a beautiful theory—a system which explained every thing—to observe with sufficient strictness the rules of analytical investigation; and his system of chemistry seems liable, even in the last form which he gave it, to all those judicious and philosophical criticisms which the first sketch of it called forth from Dr. Black.

We cannot conclude these very general and desultory reflections, without again expressing our obligations to Mr. Robison for the high intellectual treat which this publication has afforded us. If any thing could render the present more acceptable, it would be the addition of an index, or a full table of contents.

LONDON UNIVERSITY AND KING'S COLLEGE.*

[From the Edinburgh Review.]

It must be a matter of sincere congratulation to all the friends of sound and liberal principles, that the prejudices which were at first arrayed against the establishment of the University of London have disappeared, we cannot say gradually, but in less time than the walls have taken to rise. If this must chiefly be ascribed to the objectors having been very clearly in the wrong, it may nevertheless be in part also deduced from their receiving no support in the quarters to which they probably looked for it, the ancient seminaries of Oxford and Cambridge, and from the conciliating and respectful tone upon every occasion adopted towards those illustrious bodies, by the patrons of the new institution. How, indeed, could either party be expected to act otherwise, giving them merely credit for common sense, and a just view of their own interests? They could gain nothing by hostile demonstrations; they had no points of collision; they had a common object in view; and their enmity could have no other effect than to frustrate the attainment of that object, and lower them in the estimation of the world. But we verily believe that

* Second statement by the council of the university of London explanatory of the plan of instruction.

much higher considerations operated upon the more enlightened leaders; both of the old establishments and of the new. Each felt that the other had a useful task to perform; the former knew that they could not educate the great bulk of the pupils destined to receive instruction in London; the latter were equally aware that they could neither receive the kind of persons, nor teach some of the things, for which Oxford and Cambridge were principally endowed; and it thus became evident to each, that the help of the other was wanting to the perfection of a national system of education. We do not intend to assert that any opposition from "the Universities," could have materially retarded the completion of the new institution; but we have no doubt that a course different from the one so properly and so wisely pursued would have delayed, if not frustrated, one of the most important consequences which could flow from it, and which seems already to be nearly realized—we mean the foundation of another college in London, supported by persons of high authority in both church and state, and destined to teach certain branches of knowledge which the London University, from necessity, and not from choice, had been obliged to omit. Having upon another occasion traced the history of the latter, we shall now follow the steps by which this more recent, but apparently flourishing scheme arose out of it.

The establishment of the University of London was begun in the summer of 1825. The objections principally urged against the plan, were, that no provision was made for religious instruction—that the metropolis was a dangerous neighbourhood for youth—and that a joint-stock company was ill adapted for superintending the education of youth. As the danger arising from a situation in London was most of all dwelt upon, and as, indeed, many even of the well-meaning adversaries of the scheme were chiefly hostile to it, from a most ill founded apprehension that it might interfere with Oxford and Cambridge, every one could easily perceive that no attempt would be made, at least by those objectors, to oppose it by means of a rival undertaking. If they honestly believed the university to be hurtful,

because it taught young men among the temptations of London, or because its prosperity would injure the old seminaries of learning, they could not wish to double those mischiefs, by founding two institutions instead of one. If, on the other hand, they only disliked the new institution and its authors, or desired to obstruct every plan for the improvement of education, they might, while it was yet in embryo, have set on foot a rival scheme, in the hopes of its crushing the other without being successful itself. That no such attempt was made at a moment when it might have done irreparable mischief, satisfactorily proves the fairness of, at least, the great bulk of the objectors. Some there may have been only bent upon injuring the new university; but all those whose support could give the attempt a chance of success, were assuredly of another opinion, and nothing was tried. Meanwhile the formation of the university proceeded steadily; the difficulties unexpectedly created by the distress of the times were overcome; the sum required, according to the deed, before any thing could be done, was raised;* the building was begun, and soon became an object of attention in the neighbourhood. Doubts were now entertained only as to the precise time when it would be finished and opened for the purpose of instruction. But many of the professors being appointed, and arrangements made for beginning, before the wings of the edifice were built, there appeared every reason to expect that the classes would open at the time announced on laying the foundation, that is, October 1828. Accordingly, all men acknowledged that the enterprise had succeeded; and that the university might be considered as established. Indeed in the month of May last, the body of the building was roofed in; the magnificent portico in the centre was begun; the internal arrangements were in a state of forwardness; the library and museum were collecting; particularly the fine apparatus for the Natural Philosophy class was almost completed; and

* £150,000. This was the minimum; but by the statements of the council, it appears that from £30,000 to £50,000 more will be wanted to complete the building collections, and that a part of this sum only is subscribed.

men of the most distinguished talents and highest reputation were chosen as professors in most of the departments of literature and science.

In these circumstances, the attention of many persons of weight in the country, seems to have been drawn towards the new institution, in the success of which they had probably, till now, never seriously believed. They observed, that from the fundamental principles of its constitution, the exclusion of all religious tests, and the universal admission of persons as both managers and proprietors, both teachers and pupils, without any distinction of sect, it was absolutely impossible to teach any branch of theology within its walls, or to require any religious observance from its inmates or frequenters. They were averse to a system of education, of which the most important of all branches of knowledge thus formed no part. When it was said, that no one who attends a mathematical or a German teacher thinks of requiring that there shall be prayers before the lesson, or a portion of divinity taught along with it, the answer was, that such lessons do not profess to be a complete system of education, and that they who give instruction in every thing but theology, by the omission seem to undervalue it, and to sanction the belief that merely human learning can constitute a complete circle of the sciences. When it was replied, that the omission could indicate no such imperfect estimate, but rather the contrary, founded as it was on a sense of the paramount importance of religious matters, which will allow of no compromise—that at all events there was no choice, inasmuch as men of different tenets never could agree in the kind of instruction to be given upon sacred subjects—and that to say there must be no collegiate education without theology, was in truth to say that each sect must have a college of its own—the rejoinder was, that nevertheless the interest, perhaps the safety, of the established church, required an establishment conducted upon its peculiar principles, whither those might resort to whom the enforcement of its discipline, and the promulgation of its doctrines, presented no obstacles; so that while the one seminary should teach all descriptions

of men, the other might receive that large portion which agrees with the national establishment.

We purposely omit all reference to the topics of mere abuse, drawn from unpardonable misrepresentation, with which some partisans sought to disfigure this important discussion; and confine ourselves to the intelligible and perfectly justifiable ground taken by the more respectable, and we are most willing to believe, more numerous supporters of the new college. It is perfectly evident, that upon such grounds, no one who supports the London University, can, without an evident departure from the principles of that institution, object to what we might term its younger sister, were it not rather its first-born child. For what is the very chiefest of these principles?—That education should be brought home to every one's door, and in the way most completely suited to the maintenance of absolute religious liberty. If each sect were sufficiently numerous to support a college, the best system would be a set of collèges, in each of which the same branches of knowledge were taught, except those connected with religion, and that those again should vary in each, according to the peculiarities of doctrine distinguishing the class of believers it belonged to. A . however, this is not the case, there must be an establishment open to all, to church as well as sects, teaching every thing but theology; and each must provide that branch of instruction apart, either at home or in private seminaries. But the members of the church compose a great proportion of the community; exceeding perhaps all the sects together in point of numbers—in wealth and influence very greatly exceeding them. They are, generally speaking, agreed upon every thing that is essential, whether as to doctrine or discipline; and an establishment might therefore be formed for their use, which needed not either to exclude theological instruction, or to dispense with religious observances. By the same rule that the dissenters say, "I will not send my child to a college where the liturgy is used, and the thirty-nine articles taught;" a churchman may say, "I will send no child of mine where the prayers of the church are not read, and its tenets inculcated." And

they who, in deference to the honest scruples of the former, open the doors of one institution to all, by imposing no restraint which any can feel burdensome, must, if they are consistent, admit the expediency of affording the latter another resort, if unfortunately excluded from the first, by the very means taken to prevent exclusions. Nor will it be enough to say that the churchman is wrong in this view of the subject, and to argue that he may send his son to the university for letters and science, and teach him religion elsewhere. He may be quite wrong; and it may be quite right to argue with him, and try to persuade him of it; but it is his conviction, until you have converted him; he thinks now that he is right, and he must act upon that opinion; and therefore it is perfectly fit that he should have the means of obtaining the education required, without the sacrifice which was only made by the London University, because it was unavoidable. If the presbyterians or the baptists were numerous enough to have a college of their own, the same argument would apply to their case. But the church can maintain a college; and it is most fit that there should be one for its members; that is, for such of its members as cannot be persuaded that religion may be taught apart from the other branches of education.*

* We had occasion formerly to urge a similar argument in one part of the great controversy respecting schools. The principles, indeed, upon which all these questions rest on either side, are precisely the same. The argument respecting the distribution of the Scriptures, without note, or comment, and that touching schools for all, instead of schools where a certain creed is taught, are only varieties of the same doctrine which has been broached upon the foundation of a college without theological lectures. But it is remarkable that we find the topics identical even in their more minute details. Compare with this view, the observations in the text, on the inconsistency of those advocates for academical instruction, who, in order to unite all sects, and open the university to every one, maintain the necessity of leaving the students to learn religion elsewhere, and yet object to a college being provided by churchmen where *their* children may be taught theology, with the similar reasoning used towards some very worthy friends of education among the Dissenters, who objected to any schools being opened where the children of churchmen might, if they pleased, be taught the catechism, (vol. xxxiv. p. 235.) "A churchman, (it is there said,) as naturally prefers a school where the catechism is taught, as a

It is quite true, that when this point comes to be more closely examined, the difficulty is extreme, of discovering why a single seminary, where many things are taught, should necessarily have theological lectures and public prayers, any more than three or four schools devoted to different branches of instruction; why, because there are assembled under one roof teachers of anatomy, mathematics, and Roman antiquities, a professor of theology should also be there, when no one would think of connecting that study with anatomy, or with mathematics, or with Roman literature, if taught separately in different places. No less hard is it to explain the grounds of alarm felt by many, lest the principles of youth should be injured, and their religious impressions weakened by attending those lectures in one place, where no theology is taught, and no attendance on public worship required, while the same youth may with perfect safety frequent the like lectures in different places, without any religious instruction or discipline whatever. Accordingly, there is another apprehension added to this, and which, we believe, has influenced many who were sensible of the weight of the arguments just alluded to. They conceive that the security of the church establishment is likely to be endangered by the existence of a flourishing college wholly unconnected with it. Now, though this seems a needless alarm, as long as Oxford and Cambridge prosper, richly endowed in themselves, and inseparably connected with the ecclesiastical system of the country, yet nothing can be more fit, than that the metropolis should have a great university connected with the church, for the convenience of such of its inhabitants as prefer the plan of domestic education, or cannot afford the charge of

sectary prefers one where it is excluded. Nor is it any answer to say, that the dissenter cannot send his child where it is taught, while the churchman may send his where it is excluded. He may, undoubtedly; but he may also prefer the other; and this preference produces no sort of evil effect, unless in the single case of the community he lives in not being large or rich enough to support schools on both plans." So a college where theology is taught, must be injurious, unless in London, where there is room for one on each plan.

sending their children to the more distant schools of learning; and if the preservation of the establishment is likely to be consulted by founding a college in London, devoted exclusively to teaching churchmen, amply provided with instruction in every branch of theological learning, and indissolubly united to the church by the form of its constitution, every friend to education must be gratified by witnessing its erection,—well aware that there is in the metropolis sufficient room for two colleges, and that the prosperity of the one formed upon a principle of exclusion, could not in the least degree injure the other, established upon an opposite principle of universal admission. No one who merely looks to the interests of learning, who desires only the unlimited increase of the means of education, can consistently with his principles object to a measure calculated to enlarge those means, and to promote the spread of literature, because it may happen, that such a measure will also give stability to the hierarchy. As well might the charitable foundations connected with the church be complained of, or the learning and accomplishments of its members, or the piety and virtue of their lives; for these undeniably have a tendency to augment the authority and extend the power of the church.

It followed from these considerations, that those friends of the established church who felt the apprehensions to which we have referred, were desirous of founding in London a college as nearly as possible upon the plan of the ancient universities; and that those who wished well to the progress of education, including many steady friends of the established church, were quite satisfied that nothing but good could result from the plan,—although they did not at all share in the apprehensions, and believed that two colleges upon the same unexclusive principle, would have been better adapted to the great object in view, equally safe for the church, and more conducive to the interests of education. But there is reason to think, that the promoters of the new undertaking had not sufficiently adverted to the necessary peculiarities of a *London* college, when they resolved to found there an establishment connected

with the church, as the universities are; and supposed that this could be effected by merely planting in the capital a seminary on the model of one of the houses at Oxford or Cambridge. We shall now take a cursory view of the proceedings already adopted, and advert to those which must evidently be resorted to, which we think will clearly show, that with the best intentions, the patrons of the new scheme have been already compelled by circumstances which they cannot control, to deviate widely from their own fundamental principles; and are pretty sure to end by founding a second college, on very nearly the same principles which have presided over the formation of the London University.

The objects of those who promote this institution, were distinctly stated in the resolutions adopted at their public meeting, held at the Freemasons' Tavern, on the 21st of June, with the Duke of Wellington in the chair. The first of these lays it down as the fundamental principle of the whole, that "while the various branches of literature and science are made the subjects of instruction, it shall be an essential part of the system to imbue the minds of youth with a knowledge of the doctrines and duties of Christianity, as inculcated by the United Church of England and Ireland." It is here announced that religious knowledge, according to the principles of the established church, is to be a necessary part of the course of instruction. Whatever else may be taught, those principles are, at all events, to be inculcated. Something, however, like a relaxation of this rule appears in the third resolution, which gives the outline of the plan. For there is a division of the college into two departments, a higher for the elder students, and a lower for the younger, and it is then expressly said, that "the benefit of attending any course of lectures in the higher branches, is to be allowed to all who may be disposed to avail themselves of it under such regulations as may be prescribed." It seems obvious, that the distinction here taken between the classes frequented by the older, and those frequented by the younger students, can only be made for the purpose of allowing the former to be attended by persons unwilling to comply with the exigency of religious instruction

and observance. • But nothing very explicit is given upon this subject, and we are not told, in plain terms, whether the younger students are to be all resident, and consequently more under discipline; nor, indeed, is any thing farther said as to residence, except that “students are to be received within the walls, under such rules of discipline, and to such an extent, as may be hereafter determined;” and that tutors are mentioned, along with the principal and professors, as the persons in whom is to be vested the superintendence of the college. In all probability, the details of the plan had not at that early period been sufficiently considered; and little more of the difficulty attending any attempt to carry on a college in London upon the old plan, had been felt, than that some change must be made in it, and some opening afforded for students who would not conform to the strict rules enforced at Oxford and Cambridge.

In a little while, upon a nearer view of the subject, those obstacles seem to have presented themselves in greater force. For we find in the next publication from King's College, a repetition in more formal terms of the fundamental principle, but a considerably larger relaxation of it in the excepting part. “The fundamental principle,” says the official advertisement, “on which it is proposed to establish King's College, London, is this:—That every system of general education for the youth of a Christian community ought to comprise instruction in the Christian religion, as an indispensable part, without which, the acquisition of other branches of knowledge will be conducive neither to the happiness of the individual, nor to the welfare of the state.”

The same position is still farther insisted upon in the two paragraphs which follow, so as to leave no doubt that the religious instruction is considered an essential part of the course of study, and that both “for the promotion of Christianity, and for upholding the ancient and venerable institutions of the country,” it is necessary “that the evidences of the Christian religion should be taught,” and “the doctrines and duties which are professed and taught by the established church, should be inculcated.” But although the conclusion from these

premises manifestly would be, that religious instruction and discipline of the kind stated should be a necessary part of the course in King's College; or, in other words, that no one should frequent it who did not learn the doctrines, and conform to the discipline, of the church within the walls of the institution, it must have been found impossible to act upon this plan, when a nearer view was taken of the subject; for the greatest latitude is given, and most properly given, in the regulations that immediately follow the statement of the principles. A distinction is taken between "students who are members of the college," and "persons who are not regular members;" that is, between members and all others—a distinction which really, so far from being "in accordance" with the fundamental principle, seems to get rid of it altogether, at least to prevent it from producing any material effect in excluding persons who differ from the established church.

"In accordance with this principle, all the students who are *members of the college*, whether domiciliated or otherwise, will be required to attend the prescribed course of religious instruction, and to be present at divine service, performed within the walls of the college, at such times and under such regulations as may be laid down by the council.

"Persons who are not *regular* members, will be allowed to attend any particular course of lectures, in such numbers and on such terms and conditions as the council may from time to time prescribe.

"It is not, however, intended that those persons, who may avail themselves of this permission, should be entitled to contend for prizes; to obtain certificates; or to enjoy any of the privileges and advantages which it may be thought expedient hereafter to confer on the members of the college."

Therefore any person may *attend* the college, provided he is not desirous of being *a member*; for it is obvious, that the restriction as to members, and the terms and conditions alluded to in this passage, will never be enforced to the exclusion of any, while there is room to accommodate them.

Now, to what has this ample relaxation of the principle been owing? Clearly to this, that it was soon perceived how inconsistent the compulsory learning of theology, and observance of discipline, were with that kind of education which must needs form the bulk of the work to be done in a London College, namely, the instruction of day scholars, who do not reside within its walls, and for the most part pursue a course of study suited to their individual circumstances. Let us consider the matter for a little; and we shall find that still farther relaxation will be in all probability required; till at last the rule will only be applicable to the students residing within the walls, if indeed this shall continue to be a part of the plan.

Where young men are all living under the same roof, as in a college at Oxford and Cambridge, nothing can be more easy than to require attendance at chapel every morning, or both morning and evening, and to insist also upon religious ceremonies at times of meals, as the catholics do in their seminaries for educating priests. But how is it possible to require this in the case of students living in different parts of London, and only coming from their homes to attend particular lectures? There must be a fixed hour for prayers; suppose it half past nine in the morning; the student who has to attend a lecture at ten may come to prayers half an hour earlier; but what is the student to do who comes at eleven? Is he, after attending prayers, to go home again at ten, in order to set out upon his return the moment he arrives at his own house? Or is he to walk about idle for an hour in the college cloisters? Or is accommodation to be provided for him in some reading-room during the interval? But then if he attends a lecture at one or two, and not at eleven, he cannot remain the whole morning on the spot, and must go home. Then, it may be said, he has only come to church early, instead of coming to an early lecture, from which he must go home in like manner, and return to some late lecture. But who does not see that such proceedings are wholly foreign to the habits of the people of this country, of all ages, and of all classes? No one here

goes to church daily, as many do to mass in catholic countries; and no more effectual method could be devised of disinclining young men towards the observances of the church, and indeed towards religion itself, than forcing them to go every morning to college prayers, at whatever distance from their home. Besides, the student would be the only person in his family who went to a daily church; and why should the observance cease, he might naturally ask, upon leaving college? The elder branches of his family must be guilty of a great neglect, in his eye, for omitting it. If it is said that there may be family worship,—then why should not the student attend that, instead of going to the college for it? And no doubt this is the foundation of college prayers. Family worship, now so generally neglected, was formerly the general practice; and young men living in college were required to attend prayers there, on the supposition that if at home, they would be at prayers with their parents. It is evident that the attending prayers at college is incident not to the instruction there conveyed, but to *the residence* which that instruction requires; and where the student resides not, his attending prayers is out of the question. Suppose the case, which must constantly happen, of a person only frequenting a single class, with a view to professional pursuits—as the law or physic. He lives in the city, and is to come three miles to hear a lecture on surgery at three o'clock, or on conveyancing at seven in the evening. Could any thing be more preposterous than to tell him that he cannot do so unless he will also agree to come the same distance every morning at half past nine, to be present while prayers are read, and return to the city in half an hour, when they are over? But the case is not much less clear where the student goes through a prescribed course; for though one year he may be brought to the college so early as to attend the prayers without inconvenience, the next year his hours of lecture must be different, and he cannot begin his day's work with chapel, unless, after the example of catholic countries, there should be repeated performances of divine service in the course of the day.

We do not, therefore, see how it is possible to enforce attendance upon any kind of public worship upon day scholars, even if they were all of the same sect, at least to any greater extent than is practised in our Scottish Universities, where the professor who teaches the earliest class in the day, and to the younger students, begins his tuition by repeating a very short prayer. Of course this is only heard by the student, if he happen to attend that class; nor is it heard by every one who goes to college at eight in the morning, for a medical professor does not offer up any prayer, though he may teach thus early; but by the pupils who attend the junior classes. A service, if it can be so called, necessarily confined to a few minutes, and to one division of students, would certainly not satisfy those who require the performance of public worship "according to the liturgy of the established church." Indeed it would satisfy no one who deems public worship necessary in a course of education. We therefore think that the London University did wisely, in rather having none at all, than being content with the only substitute for it which could by possibility be had, in an institution avowedly formed for day scholars alone. And we think it equally clear, that the able and respectable persons at the head of King's College, will find it much better to do as their immediate predecessors have done, and leave all day scholars to attend religious worship at home, or in the churches and chapels frequented by their parents. For nearly the same arguments are applicable to any compulsory attendance upon divine service on the Sundays. It would tend little to promote the purposes which those have in view who conscientiously support the principle of combining religion with general education, that going to the college chapel once a-week should be made a condition *sine qua non*, of being permitted to attend any given course of lectures. How far such compulsory observances, whether daily or weekly, are calculated to farther the cause of religion, and strengthen the affection towards the church, even in resident students, has, we know, been doubted, by those who have discussed the system adopted at the universities; and

there is perhaps little difference of opinion, that at any rate some better mode of enforcing this part of discipline might be devised. But with that inquiry we do not for the present meddle. If King's College, London, shall have inmates within its walls, like its namesake at Cambridge, it will come within the same rule as to religious discipline; and there will be no more difficulty in the one case than in the other upon this head. Nor does it seem to us that there can be any great objection on the score of dissenters, always supposing, what we may assume to be unquestionable, that the children of churchmen will in London be quite numerous enough to require all the accommodation which both the new seminaries can afford them. It may be urged, indeed, that the benefit of being educated within the walls will be confined to those who are in communion with the established church. But we have already answered this objection; if any considerable body of churchmen conceive that attendance on the religious ordinances of the establishment is an essential part of education, they have just as good a right to provide a college where this plan is pursued, as a body of dissenters would have to found a seminary where pupils were at once taught the various branches of knowledge, and obliged to attend the worship of the sect. The exclusion from the new college only affects those dissenters who are not satisfied with the tuition of day scholars. *This* they may have, either at the London University or the King's College; and if they require to be received as resident students, they must form some seminary connected with one or other of these institutions, so that they may be lodged and boarded without the walls, and there taught the religion, and attend on the worship, of their own communion; while within the walls they attend the various courses of lectures as day scholars—a plan already adopted by persons connected with the London University, as we shall presently have occasion to observe.

The residence of pupils, therefore, appears to be almost the only material distinction between the two institutions. In every thing that regards the day scho-

lars, they must be of necessity conducted upon nearly the same principles. Of course, there is an end of all the senseless clamour raised against having a college in London, and investing a joint-stock company with the government of a seminary of learning. The King's College is to be planted in London; and half the money raised is by shares, yielding, like those of the London University, an interest, not "exceeding four *per cent.*" The government, too, is vested in a council of the subscribers and shareholders, together with certain official governors,—a slight alteration upon the plan of the university. Nominees of donors and shareholders are to be preferred as students; and the work is not to be commenced until a certain sum is subscribed. These and other arrangements are exactly the same with the plan of the university; which differs in the one essential particular, of having no resident pupils or tutors. This, together with the variety of religious classes, which have contributed to the promotion of the plan, has prevented religious instruction and observances from being made any part of the course of education and discipline,—the young men who live at home being left to the domestic instruction and discipline of their parents or private teachers; and in case any difficulty should be experienced on this score, and to provide for those students who may gather round the university, their families residing elsewhere, a very obvious, but most effectual and unexceptionable arrangement appears to have been made with the sanction of the council. Two of the professors, being clergymen of the established church, have announced, that "an episcopal chapel has been obtained contiguous to the university, where accommodation will be afforded to the students for attendance on divine service; and where a course of divinity lectures will be regularly delivered during the academical session." It is well known that this measure has been promoted and aided by a number of highly respectable individuals, chiefly belonging to the university, eminent for their piety, and warm friends of the established church, and of great name in the country. Although the council cannot, as a body, take any part in

the execution of the plan, which must, from the nature of the thing, take place without the walls, they have nevertheless expressed their decided approval of it; and upon the same principle, they have likewise sanctioned a similar plan of two protestant dissenting ministers, (one of them holding the office of librarian to the university,) who have undertaken "to deliver lectures in the immediate neighbourhood, during the academic session, on the evidences and general principles of revelation, the elements of biblical literature, and the leading facts of Ecclesiastical History." Nor can it be doubted, that if any minister of the Roman catholic church were to open a school in the neighbourhood, for teaching theology upon their principles, their project would meet with the like approbation. The university is to teach those things which churchmen and dissenters alike require, and heartily agree in. Those things on which they differ, must be learnt out of the university: but it is most fit that religion should be taught, and taught to all descriptions of believers, at the same time that they are going through the course of academical education. Far from discouraging such religious tuition, while many members of the university have individually favoured it, by their authority and their contributions, at least in the instance of the lectures and worship connected with the established church, the council has expressed its approbation of the plan as often as it has been consulted, and has shown every desire to see the means of worship and theological instruction provided for those who, living apart from their families, may require such help.

As the council could not interfere with the conduct of the students beyond the walls of the university, so it was manifestly impossible to exercise any direct control over the boarding-houses which might be opened for their reception. Nevertheless, for the convenience of parents and guardians, and to assist them in ascertaining the fitness of persons keeping such establishments, the bookseller of the university has been authorized to keep a register, in which "he may enter the names of house-keepers willing, to receive boarders;" and he has an-

nounced the conditions upon which those names will be retained upon the list : as that party shall produce ample testimonials of character ; that he shall require his boarders to keep regular hours ; that he shall allow no gaming or other licentious conduct in his house ; that his boarders shall attend some place of worship ; that he shall report any irregular behaviour or serious illness to the parents, and receive none but students of the university, &c. It is also stated, that upon the rules not being complied with, the housekeeper's name shall be erased from the register, and notice of the erasure sent to the families of the boarders.

These precautions appear to be all that the council could take to assist those residing at a distance, and desirous of sending their sons to the university, in finding a safe residence for them, and procuring the means of religious instruction. The students of this class, however, must necessarily form a very small proportion of those attending the university. The main object of its foundation was to afford the means of a complete education, upon reasonable terms, to the sons of those who reside in London, and are desirous of giving them that best of all tuition, instruction at college, while they live under their parents' roof. " Nam" (we avail ourselves of the truly felicitous quotation prefixed to the second statement of the council) "*Nam vehementer intererat vestra qui patres estis, liberos vestros hic potissimum discere. Ubi enim aut jucundius morarentur, quam in patria? aut pudicius continerentur, quam sub oculis parentum! aut minore sumptu, quam domi?*"—*PLIN. Epist.*

We have mentioned the residence of students within the walls of King's College, as almost the only circumstance in which it differs from the London University ; for it is plain, as we have proved, that the religious discipline can only be adopted in respect to residents. Religious instruction, as a compulsory part of education, is only to be exacted of those who are disposed to go through the routine of the seminary, with a view to advantages of a very limited nature, and not defined with any precision ; and it is generally understood, that

all tests, whether consisting in subscription to articles, or in any other manifestation of conformity, are given up, even as regards residents, certainly as regards occasional pupils. It appears, however, extremely doubtful, whether or not this remaining difference as to residence will continue to distinguish the two institutions. First of all, the expense must be enormously increased by it—to a much greater extent than the authors of the measure probably contemplated at the outset. For they state £100,000 as the sum to be subscribed, before any beginning shall be made. The London University made £150,000 their minimum; and we find them now admitting that it is insufficient to erect their whole building, and furnish the library and museum. Near £200,000 will probably be wanted for this purpose; certainly £180,000; and this without any provision for residence. To afford accommodation for 200 students, that is, 200 sets of chambers for them and additional sets for the tutors, and other resident officers, with chapel, dining-hall, combination rooms, kitchens, servants'-hall and lodgings, and all the other incidents to such an establishment, must require a very large building; perhaps half as much more as the building devoted to the lecture-rooms, library and museums. These must be as extensive in King's College as in the London University; consequently, there must be added to the £180,000 or £200,000 required by that institution, at least £50,000 or £60,000 more, to provide for a system of resident tuition upon any scale which can be considered as real and effective. Indeed, 200 students living within the walls, could hardly be deemed the complement of a London College; and it may be fairly assumed, that either there will be no residents at all, or more than double that number. But it by no means follows, that because £100,000 has been raised with great and most praiseworthy alacrity, in the course of less than three months, £150,000 or £200,000 more will be obtained in as many years; and if there is a deficiency of funds, there can be no doubt that the promoters of the design, when obliged to elect between completing the college as a day school, and leaving the means of public instruc-

tion half finished, in order to provide accommodation for resident pupils, would, without hesitation, prefer the former. In truth, little consideration is required to show, that, from the nature of the thing, day teaching must always be the principal object of any such seminary. The great use of it is to educate the children of parents living in London. Those at a distance, if obliged to pay for sending their sons from home, will have a natural leaning to prefer paying the same sums, or even a little more, and sending them to the ancient seats of learning. Persons desirous of professional education, no doubt, will prefer the London University or King's College,—as medical and law students. But these are quite certain also to prefer living out of the college; and would assuredly refuse to frequent any lectures, on the condition of residence and discipline. It seems very likely, therefore, that in the end the college, as well as the university, will be a seminary where day scholars are taught the various branches of learning; that the only difference will be the permission enjoyed by the students of the former to attend theological lectures within its walls, while those of the latter receive the same course of tuition in the private seminaries hard by; and that, for the accommodation of such pupils as come from a distance, some arrangement resembling that described above, as announced by the university, will be adopted also by the college.

It is hardly necessary to add, that the erection of the two seminaries must prove a singular benefit to the community. Not only will the establishment of King's College satisfy those who had conscientious (though, as we think, most unfounded and mistaken) scruples respecting the supposed defects of the university; not only will it relieve the fears (no better grounded, as we conceive) of such as were alarmed at seeing any collegiate body unconnected with the church,—but an uncalculable advantage will be gained by the means of academical education being doubled, in a situation, where, if four colleges, instead of two, were erected, the supply would soon be found all too little for the demand. And not only will the amount of instruction be in-

creased,—its quality will be improved. A most wholesome rivalry will be excited between the two bodies; and both the managers, in their administration, and the professors, in their tuition, will be stimulated, by competition, to furnish the prime blessing of sound and useful learning in the best manner, and on the most reasonable and convenient terms. That any the least danger to the ancient universities can arise from the utmost prosperity of both the new foundations, and of the others which assuredly, though on a more limited scale, will follow in other parts of the kingdom, we hold to be entirely out of the question. Even King's College, which, for obvious reasons, is the more likely to receive pupils at the expense of Oxford and Cambridge, can, to those great and flourishing seminaries, be an object of no alarm. Their houses are overflowing with pupils, for whom, even after great additions to their vast buildings, they can find no room. Never was there such a tendency, at least in modern times, and when the laity furnished the principal demand for academical instruction, to resort thither in quest of it. But were it necessary for the prosperity of the old establishments, that this good disposition should be increased, nothing surely is more likely to augment the number of families who send their sons to college, than the erection of the new institutions in the immediate neighbourhood of the numberless individuals of the metropolis, till now only acquainted with universities by name. Among these will be found many, who, when the taste for academical education has been extended, will prefer Oxford or Cambridge for one son, while the others may be sent to the nearer seminaries; and as even King's College, though a more regular school of divinity than the university, will be less eligible for those destined to the sacred profession than the old endowments, to which so much valuable patronage is annexed, we may rest assured that its greatest success will never, in any sensible degree, interfere with the interests of Oxford or Cambridge. Accordingly, the list of its patrons comprehends the names of various eminent persons, connected with those illustrious seminaries by the closest

ties,—their representatives in parliament,—several heads of houses, in their individual capacity,—two or three of the colleges themselves, as bodies corporate,—and many public men, whose known attachment to the ancient universities, is the surest pledge, that, in supporting the new foundation, they feel assured they are not acting an unfriendly part towards the old.

It is impossible to survey these proceedings without the most lively gratification, at the mighty proofs which they afford of the improving spirit of the age, and the earnest, still more cheering which they give of improvement yet more universally diffused and with a more swiftly accelerated pace. Whatever may have been the motives of some in joining the founders of King's College, nay, though we were to admit what has certainly been surmised, that some among the founders themselves were actuated by feelings of a hostile nature towards the London University, or, at least, towards the principles of its constitution, ill understood by them, we cheerfully overlook any little impurities which may tinge the source, lost as they are in the wholesome stream that is rising from it. What friend of education could stop to inquire *why* the leaders of the hierarchy took up the cause of national schools—when he saw that the result was to plant two or even three, for every one established before, by the more humble individuals who began the good work? Who but hailed, with un-mixed delight, the entry of bishops into the wide and almost untrodden field of infant instruction? * Where, then, shall bounds be placed to the joy of the advocates of knowledge, when they behold the most powerful persons in the state, the heads of the government, the law, and the church, all uniting in the great effort to bring home to every man's door the benefits of a liberal edu-

* We have before adverted to the worthy and pious Bishop of Winchester, before he quitted his former diocese, calling upon his clergy to explain why infant schools were not founded in their several parishes. His brother, Dr. J. B. Sumner, has been since raised to the bench—one of the greatest ornaments, for talents, learning, and integrity, of the English church—whose elevation affords a striking contrast to the wretched policy that prescribed the neglect of Paley.

cation, and to domesticate among the myriads of busy men that throng the scene of all trades and all professions, and among the idlers that flit round the haunts of fashion and pleasure, those calm pursuits of science and letters, which were once deemed only fit for sequestered spots on the sacred streams, and for the chosen few who people their margins? In feeling thankful for the change, let us not forget that many of those who have suffered themselves to undergo it, deserve the utmost praise for the effort they must have made to conquer their prejudices; although it may be quite true, that in some, one prejudice has overcome another.

But great as the wish of all must be to see both institutions proceeding in the spirit of honest emulation to the attainment of their common object, and arduous, and hitherto successful as the efforts have been, of those who are founding King's College, to press forward their good work, some time must needs elapse before the London University can have any competitor; and we are therefore now to consider what claims to the support of the community it holds out, in the statement which the council have published of their preparations.

It appears that the most important of the professorships have been filled up, if we except Moral Philosophy and history. Thus all the Medical School is complete, except Surgery, and that, for the present is to be taught with Anatomy. In the School of Law, the professors of English Law and general Jurisprudence are appointed: the chair of Civil Law not being yet filled. The department of general education is also nearly complete; there are professors of the language and literature of Greece and Rome and England; Germany, Italy, and Spain; of Mathematics and Natural Philosophy; of Chemistry, Botany, Zoology, and Comparative Anatomy; of Political Economy; of Hebrew, Hindostanee, and Oriental Literature. To the vacant chairs already mentioned, must be added those of Geology, Mineralogy, French Literature, and the application of Chemistry and Natural Philosophy to those Arts.

Where so many names of acknowledged eminence appear, it would be invidious to mention particulars; but we may state, as an indication of the desire evinced by the council to obtain the ablest teachers in every resort of learning and science, that of the eleven professors already chosen, (excluding the Medical School and that of modern languages,) one is a member of Trinity College, Dublin; two of the University of Edinburgh; five of the University of Cambridge; and two of no university.* But some estimate may be formed, both of their capacity to teach, and of the kind of instruction which they design to give, by the outlines which the council have published of each course of lectures. Thus it will give an idea of the great fulness and precision with which Natural Philosophy is to be taught, if we extract, from the outline of that class, the head of Geodæsy, and show how a subject, often almost passed over, as lying on the borders of Mathematical and Physical science, is to be here thoroughly exhausted. It forms one of the five divisions of Dr. Lardner's senior course.

“PART III. GEODÆSY.

“OBJECTS OF GAODÆSY;—Surveying in general—determination of the magnitude and figure of a large tract of country—Triangulation—to determine the magnitude of a spherical triangle—of the *spherical excess*—*General Roy's rule*.

“OF LEGENDRE'S METHOD;—Rule for reducing spherical triangles to equivalent plane ones—application of this rule not confined to small spherical triangles.

“OF DELAMBRE'S METHOD;—Reduction of the spherical angle to the angle under the chords—Application of this method.

“OF SIGNALS;—Day signals—Towers, spires, flagstaffs, &c.—Flat disc pierced—Night signals—White lights

* No one who reads the list of the council, can for a moment suppose that the promoters of the London University have any prejudice against Oxford and Cambridge. Five of these councillors were regularly educated at Oxford, four at Cambridge, and several others are known to have sent their sons to these seats of learning.

—Argand lamps with parabolic reflecters—Method of *Gauss*—Method of *Lieut. Drummond*.

“OF GEODETICAL INSTRUMENTS;—The repeating circle—The theodolite—Repeating theodolite, &c.—Corrections necessary in the angular measurements.

“OF BASES;—Methods of measuring them—Bases of verification.

“OF CORRECTIONS DEPENDING ON THE SPHEROIDAL FIGURE OF THE EARTH;—Reduction of the apparent to the geocentric latitude—Determination of the *reduced latitude*—Determination of the angle under the normal and direction of the centre—Determination of the earth's semidiameter at the station—Determination of the radius of curvature—Determination of the equatorial diameter and the eccentricity.

“ACCOUNT OF THE GREAT SURVEYS.”

There is no appearance, however, of greater minuteness and fulness in the lectures on Natural Philosophy, than in those on all the other branches of literature and science. Indeed the great length of time devoted to the duties of their departments by the professors, will make the thorough discussion of their whole subjects a matter of necessity. The academical year lasts, generally speaking, eight or nine months, and some of the professors teach every day, three or four hours; others five times a week, and two hours a-day. But we shall better show the length of the courses of lectures, by comparing some of them with similar courses at seminaries famous for the eminence of the professors, and the diligence and success of their teaching. This will also enable us to appreciate the relative expense of the system of instruction. Let us for this purpose take Guy's Hospital, second to none in the island for every thing that can recommend it, either to patients or pupils. The two courses of anatomy occupy there each 100 hours of instruction, and cost the pupil nine guineas; the two courses of the London University occupy 120 hours each, and cost £7. Chemistry at Guy's is taught in two courses of 50 hours each, and for six guineas; in the London University, it is taught in two courses of

twice the extent, or 100 hours each, and the fees amount to £7. A first course of *Materia Medica* at Guy's occupies 34 hours, and costs three guineas; at the London University it occupies 80 hours, and costs £3. This comparison is made by those who are intimately acquainted with the subject; but indeed their statements are plainly such as we should be led to by comparing the printed statements of the Guy's lectures, and the account given by the council of the University. The same comparison shows that the fees of classes required by the rules of the college of surgeons and apothecary's company, to be attended by candidates for diplomas, are at Guy's 45 guineas, at the University £41 to a student nominated by a proprietor, and £46, 10s. to one not so nominated—but for these sums he will have had at Guy's 766 hours of teaching, and at the University 1030, supposing the course of surgery, which is not announced yet, to be only as long there as at Guy's. We need hardly add, that these comparisons are by no means introduced with the design of disparaging the education at Guy's. The great attractions of that famous hospital will always secure the attendance of a large body of pupils; but it is only rendering justice to the council to show, that they have been most careful in redeeming the pledge originally given, that the means of instruction provided for the inhabitants of the metropolis, should be both ample and economical. No comparisons can be instituted respecting the courses of lectures on general subjects; we are therefore obliged to examine the instructions afforded in the medical schools, and we have purposely chosen the one of greatest celebrity as the standard.

There are other circumstances almost equally deserving of attention in the plan laid down by the council and the professors. The continued teaching for a long period, without interruption of holidays, is a great advantage, especially in the general course of education for the younger students. The system of examinations is still more important. Every professor, without any exception, is to devote a part of each week to this

essential duty; without which there can be no security that any of the pupils makes due progress, and no doubt that many, probably the bulk of them, would fail to do so. Nor is the obligation to undergo these examinations dispensed with, unless the student is willing also to forego the benefit of the certificates.

There is an arrangement made for permitting men of eminence in various branches of learning to give occasional courses of lectures; and it is understood that foreigners of high reputation are now in treaty with the council for delivering such courses. Among the professors of foreign literature regularly appointed, are already to be found names of distinguished eminence; and the outlines given by them in the statement before us, sufficiently attest their capacity for performing the tasks assigned to them.

Another laudable peculiarity of the London University, is the introduction of *new* branches of academical tuition. The professorships of foreign literature, are among the number of these; for they are designed not merely to teach the languages of Italy, France, Spain, Germany, and the northern nations, but the refinements of those tongues, and the genius and history of the literature belonging to them. The chair of general jurisprudence is also a most important addition to the school of law, an improvement, indeed, for the sake of which alone the foundation of a college would have been an inestimable service. The application of the several branches of physical science to the arts, presents a third improvement upon the ordinary system of instruction, although the admirable lectures of Professor Farish at Cambridge touch upon this ground; and, indeed, may afford a hint to the council for a separate course. A separate professorship for zoology and Comparative Anatomy, there being of course one for geology and mineralogy, is, also a very advantageous arrangement.

The following extract from the statement, beside other important information, refers to a very material department of the medical school—the collection of

of drawings by which morbid structure is to be illustrated. We believe it may be very confidently asserted, that every promise held out in this paper, published last June, has been realized; and that before these pages see the light, the museums will be thrown open to the public, in such a state as to justify every hope of complete success in the great work of instruction.

“The council have set apart a portion of the funds at their disposal for collections in anatomy, Natural History, books, and Philosophical apparatus; and they propose in the month of October to open the small library and anatomical museum. They have to acknowledge donations of nearly 400 volumes, some of them of great value; and before the opening of the University there will be a large collection of books in the several branches of study, which will be amply sufficient, at least for the purpose of reference, and in many cases far beyond it. The anatomical museum will be more complete, and will, even in the first instance, contain all that the Professor of anatomy and other medical Professors are likely to require, with provision for its rapid and indefinite extension. The council have availed themselves of an opportunity of adding to this museum a more perfect collection of drawings of morbid structure than, it is believed, has hitherto been applied to the purposes of teaching and study, and which will be peculiarly valuable to the student of the practice of medicine. Dr. A. T. Thomson is collecting a museum of *materia medica* on a more extensive scale than has hitherto been attempted in that branch of medical science. Care will also be taken that specimens for the illustration of zoology, botany, and other departments requiring them, shall be provided.

“Dr. Lardner, who has been specially employed in the collection in the philosophical apparatus, has given the following report of his proceedings:

““Since the period of my appointment I have employed several of the most eminent artists, and a collection is now in a very forward state, which, in scale and

extent, is commensurate with the great objects of this institution. In the selection and adaptation of this apparatus, although the means of original research and philosophical investigation have not been overlooked, yet the object which has been principally contemplated is public instruction. Instruments of scientific research are frequently, either from their minuteness or delicacy, unsuited to the lecture-room. Models of these on a larger scale or coarser construction have therefore been provided. Where models, of sufficient size to give the smaller parts visible magnitude in a large theatre, would be unwieldy, well executed drawings having been resorted to. To explain the operation of machines having any degree of complexity, it is desirable to exhibit their internal structure, and to show the several parts in actual motion. This having been accomplished by sectional models, which will be very extensively used, every principal fact in Natural Philosophy and astronomy will be represented by an experimental illustration, and every piece of apparatus will be on a scale calculated to render these illustrations impressive.'

"In other departments of science the apparatus is not of so difficult or expensive a nature. In chemistry, Dr. Turner is preparing all that is necessary to render the laboratory complete and efficient. In those departments of mathematics where diagrams, the parts of which are not in the same plane, are used, Mr. De Morgan proposes to construct apparatus, by which he will be enabled to exhibit the several lines and planes in their true positions, so as to give to solid geometry and its applications, all the simplicity and clearness which students find in the elements of plane geometry."

But though the difficulties, inseparable from the commencement of all novel enterprise, have now been overcome by the London University, it will still have to surmount the lesser obstacles which impede the free operation of all new mechanism. It will not at first reach its full speed; its halls will not be filled with their full number for some time; the habits of the Londoners may not for a little while incline or enable them to fur-

nish that complement. But we confidently expect that a year or two will not elapse before this consummation is effected. The King's College will then be ready to open; and it will both find the ground smoother, and will be able to profit in various ways by the experience of its predecessor. To the improvements made by the university, the college may add others; and if errors have been committed, they may be avoided. Every wise and good man will heartily desire to see *both* these institutions so conducted, as that he may wish for their unbounded prosperity, and perpetual duration.

JUNIUS IDENTIFIED*

[From the Edinburgh Review.]

THE question respecting the author of Junius's Letters, is thought, we believe, by philosophers, to be one of more curiosity than importance. We are very far from pretending that the happiness of mankind is materially interested in its determination; or that it involves any great and fundamental scientific truths. But it must be viewed as a point of literary history; and, among discussions of this description, it ranks very high. After all, are there many points of civil or military history really more interesting to persons living in the present times? Is the guilt of Queen Mary—the character of Richard III.—or the story of the Man in the Iron Mask, very nearly connected with the welfare of the existing generation? Indeed, we would rather caution, even the most profound of philosophers, against making too nice an inquiry into the practical importance of scientific truths; for assuredly there are numberless propositions, of which the curiosity is more easily desisted than the utility, in all the branches of science, and especially in the severer ones—the professors of which are the most prone to deride an inquiry like that about

* The identity of Junius with a distinguished living character established.

A supplement to Junius identified: Consisting of fac-similes of handwriting and other illustrations.

. Junius. That the community has long taken an extraordinary interest in this question ; that a great and universal curiosity has been felt to know who wrote the Letters ; seems quite sufficient to justify a good deal of pains in the research, and satisfaction in the discovery. He who should find out the longitude would, no doubt, more substantially benefit the world ; yet we dare to assert, that, for one who really profited by the discovery, a thousand would derive nothing beyond the mere gratification of curiosity ; and the inventor's fame would depend chiefly on their voice. Is any man much the better for knowing how the alkalies are composed ? In his circumstances, no one—but, in his scientific capacity, every one who regards the gratification of a learned curiosity. Let us not be too curious in settling the relative importance of literary labour, or even of scientific pursuits. It is a good thing to find out the truth, at all events ; and the pleasure of knowing what was before unknown, forms, perhaps in all cases, the greater proportion of the value derived from the inquiry.

During the last two or three years, a number of tracts have appeared upon this much agitated question. One ascribes the Letters to Glover, the author of *Leonidas* ; another, to some obscure person, whose name we have forgotten. By far the most ridiculous, however, is a series of Letters, to show that Junius was none other than the late Duke of Portland, upon the sole ground that the letters betray an interest in the famous question respecting the honour of Inglewood Forest, which occupied at that time every man who talked or wrote upon politics, and without the shadow of proof that his grace ever wrote a sentence, either elegant or forcible, in his life. We ought perhaps to observe, that a more absurd doctrine than even this, was once seriously maintained ; for some one was found to contend, in a printed book, that Delolme was Junius,—his pretensions to the name being grounded, probably, upon the admitted facts of his being a foreigner, an extremely feeble writer, and one unconscionably ignorant of most constitutional points ; and of his having, for

the first time, come to England the winter that Junius began his Letters.*

To urge any thing against such claims as these, would be wasting the time of the reader. But it may be well to remind him, before proceeding farther, that the various hypotheses, which have ascribed the letter to men of great genius and fame—to Lord Chatham, Dunning,† Burke,—as well as those which have given them to inferior persons, but of considerable talents, Hamilton, Boyd, and others,—are now deservedly exploded. The publication of Woodfall, some years ago seems to have set this matter at rest; and to have shown that there were insurmountable reasons, founded upon external evidence, against believing that any of those personages was Junius. We are half inclined to think, however, that the real author is at length detected; and we shall proceed to lay before the reader the grounds of this opinion. The merit of the discovery, if the truth is indeed found out, belongs entirely to the author of the work before us. SIR PHILIP FRANCIS had never, as far as we know, been suspected. The book is written in a way abundantly creditable to the author; especially if, as we suspect, he is not a professed literary man. It does not certainly make the most of the evidence; it is somewhat too prolix; frequently dwells upon trifles:

* Other letters, indeed, of the same author, had been published under different signatures, two years before this time. The praise of Delolme's superficial book, contained in the Preface to Junius, is only a new example of the rashness with which men engaged in controversy will bestow commendations upon a work containing doctrines of which they wish to avail themselves. Burke's praises of Vattel may be given as another instance; and they have greatly added to the undue reputation enjoyed by that popular work.

† The legal expressions sometimes used by Junius, where he is not discussing any point of law, have been held by many as an evidence of his belonging to the learned profession, notwithstanding his own repeated denial. Thus, "*savouring of the reality*," &c. But in some cases he uses law language with a degree of inaccuracy which we should never have found in one of his habits of distinct and correct thinking, had he been a lawyer. Thus, in the Dedication, he makes a confusion between the *quantity* and the *species* of an estate; where he says, that the Legislature is the *trustee*, not the owner; the *fee-simple* is in the people.

and it is not always very distinct in its statements. But it contains every thing necessary for determining the question; and is written without affectation. That it proves Sir Philip to be Junius, we will not affirm; but this we can safely assert, that it accumulates such a mass of circumstantial evidence, as renders it extremely difficult to believe he is not; and that, if so many coincidences should be found to have misled us in this case, our faith in all conclusions drawn from proofs of a similar kind may henceforth be shaken.

We must premise, as this is in some sort a personal question, that we have undertaken to state the argument, without the slightest feeling of disrespect towards the distinguished individual who forms the subject of it. We may add, that we are equally uninfluenced by any idea of doing him honour. If there be any thing in the letters of Junius which Sir Philip Francis would now wish unwritten, or if he conceives any imputation to be flung upon his conduct in very early life, by the assumption that he was the author, surely the most stern moralist may well be appeased, by the lapse of half a century spent in the undeviating pursuit of the public good, and the virtuous sacrifice of all personal interests; while, on the other hand, the high rank in which those services have placed him among the patriots of his age, and the almost unbounded praise which his talents have called forth from those judges to whom a wise man would chiefly look, render it a matter of indifference to his fame, whether or not he enjoys the more general, and perhaps vulgar, celebrity which belongs to the name of Junius.

To the greater number of readers, the first question that presents itself is, whether Sir Philip Francis has ever shown the eminent talents displayed in Junius's Letters? However high his reputation may be in the political world, there is no one avowed production of his which has attracted much popular, or permanent notice, or is at present familiar to public recollection; and he has therefore shared the fate of many able men whose time has been devoted to the business of the world, and whose labour, chiefly bestowed upon sub-

jects connected with their pursuits, has left no lasting monuments of their skill in composition. So it has fared with Sir Philip Francis. His contemporaries well knew him to be one of the best writers of the age; but his writings consisted chiefly of minutes, protests, speeches and pamphlets, which have long since ceased to interest the world at large, and are only known to political men, or curious inquirers into the details of modern history. We shall therefore begin the argument by presenting a few specimens of his composition, sufficient to justify the assertion, that the author of *Junius*, whoever he may be, was not a person of greater talents than Sir Philip Francis. The proof drawn from similarity of expressions will be farther strengthened in the sequel by particular instances. All that we desire the reader, in this stage of the discussion, to consider, is the general ability displayed in the composition. We take all the examples from his speeches, carefully written and published by himself. The first shall be from his attack upon the lawyers in the House of Commons.

“It belongs to the learning of these gentlemen to involve, and to their prudence not to decide.

“In the name of God and common sense, what have we gained by consulting these learned persons? It is really a strange thing, but it is certainly true, that the learned gentlemen on that side of the house, let the subject be what it may, always begin their speeches with a panegyric on their own integrity. You expect learning, and they give you morals; you expect law and they give you ethics; you ask them for bread, and they give you a stone. In point of honour and morality, they are undoubtedly on a level with the rest of mankind. But why should they pretend to more? Why should they insist on taking the lead in morality? Why should they so perpetually insist upon their integrity, as if that were the objection *in limine*; as if that were the point in question; as if that were the distinguishing characteristic, the prominent feature of the profession? Equality is their right. I allow it. But that they have any just

pretensions to a superior morality, to a pure and elevated probity, to a frank, plain, simple, candid, unrefined integrity, beyond other men, is what I am not convinced of and never will admit.

“On my principles, however, the damage we have suffered is not very great. In attending to this learned gentleman, we have lost nothing but our time; we have wasted nothing but our patience. The question before us may easily, and can only be determined by ourselves.” p. 175, 176.

The following passage is from a speech delivered in 1796.

“If I could personify the House of Commons, it would be my interest as well as my duty to approach so great a person with the utmost respect. But respect does not exclude firmness, and should not restrain me from saying, that it is the function of your greatness, as well as of your office, to listen to truth, especially when it arraigns a proceeding of your own. I am not here to admire your consistency, or to applaud the conduct which I am endeavouring to correct. These topics do not furnish any subject for applause. You have nothing like praise to expect from me; unless you feel, as I do, that a compliment of the highest order is included in the confidence which appeals to your justice against your inclination.” p. 247.

The following attack upon Lord Thurlow has been much and justly admired.

“It is well known that a gross and public insult had been offered to the memory of General Clavering and Colonel Monson, by a person of high rank in this country. He was happy when he heard that his name was included in it with theirs. So highly did he respect the character of those men, that he deemed it an honour to share in the injustice it had suffered. It was in compliance with the forms of the house, and not to shelter himself, or out of tenderness to the party, that he for-

bore to name him. He meant to describe him so exactly, that he could not be mistaken. He declared in his place in a great assembly, and in the course of a grave deliberation, 'that it would have been happy for this country if General Clavering, Colonel Monson, and Mr. Francis, had been drowned in their passage to India.' If this poor and spiteful invective had been uttered by a man of no consequence or repute, by any light, trifling, inconsiderate person, by a lord of the bed-chamber, for example, or any of the other silken barons of modern days, he should have heard it with indifference. But when it was seriously urged and deliberately insisted on by a grave lord of parliament—by a judge—by a man of ability and eminence in his profession, whose personal disposition was serious, who carried gravity to sternness, and sternness to ferocity, it could not be received with indifference, or answered without resentment. Such a man would be thought to have inquired before he pronounced. From his mouth, a reproach was a sentence, an invective was a judgment. The accidents of life, and not any original distinction that he knew of, had placed him too high, and himself at too great a distance from him, to admit of any other answer than a public defiance, for General Clavering, for Colonel Monson, and for himself. This was not a party question, nor should it be left to so feeble an advocate as he was, to support it. The friends and fellow-soldiers of General Clavering, and Colonel Monson would assist him in defending their memory. He demanded and expected the support of every man of honour in that house, and in the kingdom. What character was safe, if slander was permitted to attack the reputation of two of the most honourable and virtuous men that ever were employed, or ever perished in the service of their country? He knew that the authority of this man was not without weight; but he had an infinitely higher authority to oppose to it. He had the happiness of hearing the merits of General Clavering and Colonel Monson acknowledged and applauded in terms to which he was not at liberty to do more than to allude; they were rapid and expressive. He must not venture to

repeat, lest he should do them injustice, or violate the forms of respect,*where essentially he owed and felt the most. But he was sufficiently understood. The generous sensations that animate the royal mind, were easily distinguished from those which rankled in the heart of that person who was supposed to be the keeper of the royal conscience." p. 182—184.

These, though extracted from speeches, are really specimens of Sir Philip Francis's manner of *writing*; since they were all printed from his own manuscript. We shall, add, however, one passage from a letter or discourse, sent, like those of Junius, to a public paper, and subscribed by his own name. It is dated so late as 1811, and relates to the great question of restriction on the regency, then in contemplation. The author was then far advanced in years;—but the reader, we think, will be of opinion, that, both in spirit and in style, it bears a more striking resemblance to the papers written by Junius forty years before, than any thing else that could be referred to during that long period.

“Who is there so ignorant, as not to know that the prerogatives of the crown are not vested for his own sake in the person who wears it, but to ensure the execution of his office; and then I ask, what power has the constitution reserved to any set of men to strip the crown of those prerogatives, or even to qualify or impair them? Show it if you can, and produce your evidence. In a case of such importance, I will not submit to authority, and, least of all, to the authority of a party, which perhaps means or expects to benefit by the decision. They, who can wholly refuse, may grant upon conditions. The lords may say you shall make no more peers. The commons may say, you shall have no power to dissolve us. The ministers of course will not submit to be dispossessed; and *this* is the executive government, which they are willing to establish in the prince's hands. Before they decide, let them make the case their own. Do they mean to admit that the king, uniting with a convention of the peers, could abolish the

House of Commons, or even divest them of any one of their privileges? Could the king and the commons, I will not say *abolish* the House of Lords, but could they take away their jurisdiction in the last resort, or in trials by impeachment?" &c.—“I am not talking of desperate or extreme cases. Necessity, unavoidable and irresistible, must be left to provide for itself. True wisdom even then will do nothing beyond what the instant exigency requires, and will return as soon as possible to its regular established courses. Neither do I deny the *power* of the people to do what they will. Undoubtedly they may tear down their temples and tribunals, and murder their teachers and their magistrates. They have a physical force to abolish their-laws, and to trample on the institutions of their forefathers. But, remember; the man who pulled down the building, and buried himself in its ruins, was blind as well as strong. The quality of an immoral act is not altered, the guilt of an enormous crime is not diminished, by the numbers that concur in it. The moment the people did these things, they would cease to be a nation. To destroy their constitution is beyond their competence. It is the inheritance of the unborn as well as theirs. What we received from our ancestors, we are morally and religiously bound, as well as by our laws, to transmit to our posterity. Of such erroneous violence on the part of the people, I know there is no danger. Will they suffer any other power to do that in their name, which they cannot and ought not to do for themselves? I heard it from Lord Chatham, “that power without right is the most odious and detestable object that can be offered to the human imagination. It is at once *res detestabilis et caduca*.” Let who will assume such power, it ought to be resisted. Brave men meet their fate; cowards take flight, and die for fear of death.”

p. 218—222.

Now, we humbly conceive, that the most careless reader must be struck, not only with the general ability and eloquence of all these passages, but with their extraordinary coincidence with the letters of Junius, in all

even their most remarkable characteristics. The boldness, and fierceness of the tone—the studied force and energy of the diction—the pointed and epigrammatic cast of the style—the concise and frequent metaphors—and the mixture of the language of business and affairs, with a certain scholastic elegance and elaborate sarcasm.

These, however, are general indications, and could lead to no positive conclusion: but there are many particular circumstances of a personal and historical nature, that go much farther to make out the proposition contended for. The first of these is the exactness with which the dates of the Letters tally with Sir Philip Francis's residence in this country, and his going abroad. In Biographical Memoirs, understood to have been drawn up by a person connected with him, it is stated, that Sir Philip spent the greatest part of the year 1772 on the continent. Now, the last letter of Junius in that year is dated May 12th, and was received by Woodfall two days before. Sir Philip's dismissal from the war office is announced in one of the letters of Veteran, (a name under which Woodfall has shown that Junius then wrote,) dated March 23d; and some time must naturally have elapsed before he set out. A letter of Junius, dated in May, mentions his having been out of town; and in point of fact, he wrote nothing from March 23d to May 4th. Sir Philip's father was then ill at Bath; and it is most probable that he went to see him before going abroad. From the above mentioned notice in the memoirs, it appears that he must have returned at the end of 1772, or early in 1773, provided we are satisfied that he went abroad in May: for it is there stated, that "about half a year after his return" he was recommended as one of the new council at Fortwilliam: now, the act appointing the council passed in June, 1773;—which tallies with the supposition of his arrival having been in the month of December or January preceding. Keep these facts in view, it is very important to remark, that the first letter received by Woodfall from Junius, after the letter of May, 1772, is dated January 19th, 1773. This, too, was also the last letter which he ever wrote. The appointment of Sir

Philip Francis to India was, either then or soon after, in agitation; for it was finally arranged before June. Now, the supposition that he was the author of Junius, presumes that the prospects of being sent to India put a period to his labours.

It is known that Sir Philip was a clerk in the war office from 1763 to 1772; and Junius evinces a peculiar acquaintance with, and interest in, the business and the persons of that department. As some of those persons are obscure individuals compared with the distinguished objects of his ordinary attacks, a very strong presumption arises from hence, that the anonymous writer was himself connected with the office; and the familiar tone in which they are mentioned, greatly strengthens the conclusion. We shall principally advert to what he says of Mr. Bradshaw, Mr. Chamier, and Mr. D'Oyly. Junius, in the 36th letter of the common edition, dwells, at some length, on Bradshaw's pension, and speaks of him in terms indicative of considerable personal animosity. In a note, he says, "he was too cunning to trust Irish security." He gives a sketch of his history, tracing him from his beginning, as a "clerk to a collector for forage,"—to his being "exalted to a petty post in the war office,"—and sarcastically remarking, that, upon his subsequent promotion, he thought it necessary to take the great house in Lincoln's Inn Fields, where the Lord Chancellor Worthington had resided. In the 57th letter, he is called the Duke of Grafton's "cream-coloured parasite;" and in the letters signed Domitian and Veteran, published by Woodfall, he is familiarly mentioned as "Tommy Bradshaw," "the cream-coloured Mercury," whose sister, "Miss Polly, like the moon, lives upon the light of her brother's countenance, and robs him of no small part of his lustre."* In a letter also written by Junius, but under another name, Bradshaw is said to observe, that the writer has "drawn his intelligence from the first source, and not the common falsities of the day;"† and of this, he says Bradshaw cannot be ignorant. But although it is clear that Junius's pre-

* Woodfall's Junius, III. 406—424.

† *Ib.* p. 273.

judice against this gentleman was of long standing, and connected with his more obscure station in the war-office, it is also true, that at the time of the attacks upon him, he filled a considerable station, and was more in the public eye. This, however, can hardly be said of Mr. Chamier, upon whom a far more incessant fire is kept up. He is termed, "that well-educated genteel young broker, Mr. Chamier." A scene is figured between Lord Barrington, his patron, and a general officer in which every kind of ridicule is thrown upon Chamier. He is called "Tony Shammy"—"Little Shammy"—"a tight active little fellow"—"a little gambling broker"—"Little Waddlewell"—"my duckling"—"little three per cents. reduced"—"a mere scrip of a secretary"—"an omnium of all that's genteel"—with many other coarse and scurrilous appellations. No less than four letters are addressed to Lord Barrington in the bitterest tone of invective, in consequence of Chamier's promotion; and it appears that his relationship with Bradshaw is one of the chief grounds of attack upon the latter; and whoever reads the following, which comes after these, will be at no loss to divine the cause of all the hostility, upon the supposition that they are written by Sir P. Francis.

"I desire you will inform the public that the worthy Lord Barrington, not contented with having driven Mr. D'Oyly out of the war-office, has at last contrived to expel Mr. FRANCIS. His lordship will never rest till he has cleared his office of every gentleman who can either be serviceable to the public, or whose honour and integrity are a check upon his own dark proceedings. Men, who do their duty with credit and ability, are not proper instruments for Lord Barrington to work with. He must have a broker from 'Change Alley for his deputy, and some raw, ignorant boy for his first clerk. I think the public have a right to call upon Mr. D'Oyly and Mr. FRANCIS to declare their reasons for quitting the war-office. Men of their unblemished character do not resign lucrative employments without some sufficient reasons. The conduct of these gentlemen has

always been approved of; and I know that they stand as well in the esteem of the army, as any persons in their station ever did. What then can be the cause that the public and the army should be deprived of their service? There must certainly be something about Lord Barrington which every honest man dreads and detests. Or is it that they cannot be brought to connive at his jobs and underhand dealings? They have too much honour, I suppose, to do some certain business by *commission*. They have not been educated in the conversation of Jews and gamblers;—they have had no experience at Jonathan's;—they know nothing of the stocks; and therefore Lord Barrington drives them out of the war-office. The army indeed is come to a fine pass, with a gambling broker at the head of it!—What signifies ability, or integrity, or practice, or experience in business? Lord Barrington feels himself uneasy while men with such qualifications are about him. He wants nothing in his office but ignorance, impudence, pertness, and servility. Of these commodities he has laid in a plentiful stock, that ought to last him as long as he is secretary at war. Again, I wish that Mr. FRANCIS and Mr. D'Oyly would give the public some account of what is going forward in the war-office. I think these events so remarkable, that some notice ought to be taken of them in the House of Commons. When the public loses the service of two able and honest servants, it is but reasonable that the wretch, who drives such men out of a public office, should be compelled to give some account of himself and his proceedings." p. 86, 87.

It is to be observed, that Junius took care not to write this letter, nor any of those upon Chamier's promotion, under his usual signature, because this would at once have directed the suspicions of the public towards the war-office, as the quarter in which he lurked, and even towards the individuals chiefly interested in the questions respecting Chamier. For the same reason we find him urging Woodfall to conceal his being the author of those attacks upon Lord Barrington. "Keep the author a secret," says he, (*Woodfall*, I. 255)—that

is, keep the secret that Junius, Veteran, Nemesis, &c. are the same person : for he knew no other author than Junius. It is, however, not at all improbable, that the clue to the discovery of Sir P. Francis was furnished by these letters on the war-office ; for they are the last ever written by Junius, except the private letter to Woodfall in January, 1773 ; so that he seems, on being detected, probably by Lord Barrington, to have given over writing ; and he was soon after appointed to the council in Calcutta.

Junius shows an uncommon acquaintance with, and interest in, the transactions of the foreign department as well as the war-office : and the period to which his knowledge refers, precedes the death of Lord Egremont in 1763. Thus, he says, in the 23d letter, referring to the negotiations of 1763, " Even the callous pride of Lord Egremont was alarmed ; he saw and felt his own disgrace in corresponding with you (the Duke of Bedford,) and there certainly was a moment at which he meant to have resisted, had not a fatal lethargy prevailed over his faculties, and carried all sense and memory away with it." In a note he adds, " This man (Lord Egremont,) notwithstanding his pride and tory principles, had some English stuff in him." Upon an official letter to the Duke of Bedford, the Duke " desired to be recalled ; and it was with the utmost difficulty that Lord Bute could appease him". In a private letter to Woodfall (I. 200,) he says, " that he can threaten him privately with such a storm as would make him tremble even in his grave." Now Sir Philip Francis was appointed a clerk in the foreign office in 1756 ; and having afterwards gone to St. Cas as General Bligh's secretary in 1758, and to Lisbon in 1760, with Lord Kinnoul, he returned to the foreign office between October, 1761, and August, 1763 ; for, in his speech in the House of Commons, already referred to (Parl. Deb. xxii. 97,) he says, that he possessed Lord Egremont's favour in the secretary of state's office ; and that nobleman came into it, October, 1761, and died August, 1763. The negotiations of the Duke of Bedford were carried

on between the beginning of September and the beginning of November, 1762.

The manner in which Junius always treats Lord Chatham, coincides exactly with the expressions of Sir Philip in his speeches and writings; and is such as might naturally be expected to result from the kindness he had received from that great man, as well as from his known principles. But the high admiration of Lord Chatham which Junius has shown, seems not easily reconciled with his kindness towards his antagonist Lord Holland. "I wish Lord Holland may acquit himself with honour," says he in a letter to Woodfall (I. 174;) and when he suspected Mr. Fox of attacking him anonymously in the newspapers, instead of retaliating, as he did in the letters already noticed against Lord Barrington, and at once charging Lord Holland or his son with having been the writers of this attack, as he did Lord Barry and others in similar cases, he says that "he designedly spares Lord Holland and his family;" but adds, that it is worthy of their consideration, "whether Lord Holland be invulnerable, or whether Junius should be wantonly provoked." (III. 410.) He shows this manifest forbearance towards the Fox family, not under his usual signature of Junius, but under another, assumed for the obvious purpose of concealing it, and yet of keeping them from forcing him into a contest with them. The history of Sir Philip at once explains all this. His father was Lord Holland's domestic chaplain, lived on intimate terms with him, and dedicated his translation of Demosthenes to him, as the patron to whom he owed his church preferment. Sir Philip himself received from Lord Holland his first place in the foreign office. These circumstances must have overcome the natural inducement which Junius had to join in the attacks upon Lord Holland, for a conduct which, whether justly or not, was made the constant topic of invective by all who took the side of Lord Chatham.

It is clear, from his private correspondence, that Junius, whoever he was, bore a great personal goodwill towards Woodfall. "The spirit of your letter," says

he, "convincing me that you are a much better writer than most of those whose works you publish." (I. 196.) "For the matter of money, be assured that, if a question should arise upon any writings of mine, you shall not want it. My own works you shall constantly have; and, in point of money, be assured you shall never suffer." (*ib.*) Again—"You must not write to me again; but be assured I will never desert you. If your affair should come to a trial, and you should be found guilty, you will then let me know what expense falls particularly on yourself, for I understand you are engaged with other proprietors;—some way or other *you* shall be reimbursed." (I. 208.) "For my own part, I can very truly assure you, that nothing would affect me more than to have drawn you into a personal danger, because it admits of no recompense." (I. 221.) "You cannot offend or afflict me but by hazarding your own safety." (I. 235.) "I have the greatest reason to be pleased with your care and attention; and wish it were in my power to render you some essential service." (I. 246.) In a letter to Wilkes, he expresses the same anxiety about Woodfall's safety; says that the danger to which he is exposed afflicts and distresses him; and plainly insinuates, that he has spared Lord Mansfield for Woodfall's sake. (I. 326.) But, for other publishers, he seems to have felt no such tenderness; for he frequently tells Woodfall, if he is afraid himself, that he may send such and such letters to other printers, whom he names. (Sec I. 224, 226, 234.) Now, it appears from Nicholas's Biographical Anecdotes, that Woodfall was only a year older than Sir Philip Francis, and that he was educated at St. Paul's School, where the latter is known to have been bred; and it is asserted in the tract before us, that Woodfall's son speaks of the acquaintance formed there between Sir Philip and his father, as having given rise to a mutual kindness during their after-lives, although they rarely met. It must be admitted that this tallies peculiarly well with a suspicion expressed by Junius at one part of the correspondence, that Woodfall might know him. He says, "I beg you

will tell me candidly whether you know or suspect who I am." (I. 171.)

There is reason also to believe that Junius was known to Garrick. He expresses himself much alarmed by the inquiries of the latter, and was afraid lest Woodfall might have told him the place where the letters were sent, which he desires him to change. He writes a note, to be sent to Garrick, with the view of intimidating him, and thus preventing his meddling, and endeavouring to trace the secret; and he desires Woodfall to copy it in his own hand. Sir Francis has told us, in the preface to the play *Eugenia*, that he enjoyed the "friendship and esteem" of Garrick.

It appears, from various passages in Junius, that the author used to attend the debates in parliament, and that he frequently took notes of the more important speeches: That he did so more especially in the year 1770 and 1771, is clearly proved, by his quoting Lord Chatham's speeches from reports not then made public, and by his frequently referring to debates at which he was present. Sir Philip Francis is known to have been an occasional attendant upon the debates during the same period,—for he cites Lord Chatham's speeches at that time as having heard them; and there seems no reason to doubt that he is the member of parliament described by Almon in his life of Lord Chatham, as having furnished him with notes of those speeches, taken by him when he was not in parliament. But there is a more remarkable coincidence than this between Junius and Sir Philip. Lord Chatham's speech, at the opening of the session in January, 1770, was reported by Sir Philip, and communicated first to Almon, who published it in 1791, and then to the *Parliamentary History*, (xvi. 647.) The publisher of the latter work informed the author of the tract before us, that he received it from Sir Philip, who was present at the debate. Now, a comparison of this speech with some of Junius's letters, proves very satisfactorily, that Junius must either have heard the speech, and taken notes of it, or received notes from somebody who was present; and not only so, but that the notes which he took or received were nearly

the same with those taken by Sir P. Francis. We shall cite some examples of this coincidence.

Sir P. Francis's Report.—"That on this principle he had himself advised a measure, which he knew was not strictly legal; but he had recommended it as a measure of necessity, to save a starving people from famine, and had submitted to the judgment of his country." p. 262.

Junius (Woodfall, II. 365.)—"Instead of inserting that the proclamation was legal, he (Lord Camden) should have said, "My Lords, I know the proclamation was illegal, but I advised it, because it was indispensably necessary to save the kingdom from famine; and I submit myself to the justice and mercy of my country." p. 362-3.

Sir P. Francis's Report.—"He owned his natural partiality to America, and was inclined to make allowance even for those excesses. That they ought to be treated with tenderness; for in his sense they were ebullitions of liberty which broke out upon the skin, and were a sign, if not of perfect health, at least of a vigorous constitution, and must not be driven in too suddenly, lest they should strike to the heart." p. 265.

Junius (Woodfall, I. 153, II. 311.)—"No man regards an eruption on the surface, when the noble parts are invaded, and he feels a mortification approaching to his heart."

—"I shall only say, give me a healthy vigorous constitution, and I shall hardly consult my looking-glass to discover a blemish upon my skin." p. 265.

Sir P. Francis's Report.—"That the Americans had purchased their liberty at a dear rate, since they had quitted their native country, and gone in search of freedom to a desert." p. 268.

Junius (Woodfall, II. 77.)—"They left their native

land in search of freedom, and found it in a desert." p. 268.

There are many other expressions in this speech, and in others of Lord Chatham, reported by Sir Philip, which appear to be the favourite expressions of Junius. Thus, "*false fact*"—"I am a plain man"—"*ipso facto the law of the land*"—"simplicity of common sense, &c."

There are many favourite expressions in the avowed original works of Sir Philip, which Junius also indulges habitually. "*Of his side*"—"so far forth"—"*I mean the public service*" (for, *I would promote.*) There is, moreover, in the general manner of writing, a resemblance extremely striking, especially where the author is off his guard, and permits his natural temper to appear. Sir Philip's later works resemble, in this respect, the private notes to Woodfall so strikingly, that we need scarcely give any examples. There is, for instance, a short note to Sir P. in this publication in the following terms. "*Pray* never mind any thing I say, I *slave* myself to death, and write and speak on instant impression.—So I am very sorry if I have offended you." The very same tone, and almost the same words, occur in two notes of Junius, printed by Woodfall;—one of which begins, "*Pray* tell me whether George Onslow means to keep his word with you;" and ends, "and so I wish you good night;"—And another runs thus, "Make yourself easy about me—I know you are an honest man—and I am never angry—I am overcome with the *slavery* of writing." We have not room to add other instances; but we have heard, that among those persons in London who have lived in his society, and are acquainted with his mode of expression, the conviction of his being the author of the Letters is exceedingly strengthened by this likeness.

That the tempers of Junius and Sir Philip somewhat resemble each other, we have their own authority. Junius says to Woodfall—"Surely you have misjudged it very much about the book. I could not have conceived it possible that you could protract the publication so long. At this time, particularly before Mr. Saw-

bridges motion, it would have been of singular use. You have trifled too long with the public expectation. At a certain point of time the appetite palls. I fear you have already lost the season. The book, I am sure, will lose the greatest part of the effect I expect from it. But I have done." (p. 157.) And again, to Wilkes, "You at least, Mr. Wilkes, should have shown more temper and prudence, and a better knowledge of mankind. No personal respects whatsoever should have persuaded you to concur in these ridiculous resolutions. But my own zeal, I perceive, betrays me: I will endeavour to keep a better guard upon my temper, and apply to your judgment in the most cautious and measured language. (*ib.*) Sir Philip, in his speech (Parl. Debates, xxvii. 240,) says, most characteristically, "It was his purpose on this occasion to say things strong, severe, and personal; and if he should be thought to exceed the bounds of moderation, he desired it might not be imputed to a hasty impatience of temper, to which he was supposed to be more subject than other men: for he said them coolly and deliberately, and after having maturely reflected on their cause, and on their consequences." (p. 158.) And again, in his speech, February 26, 1788, "Much has been said of my character, much of my temper. I have by one learned gentleman, not now present (the Master of the Rolls,) been accused of comparing myself with him, and with others of his profession. Such a comparison I never presumed to make. Arrogance is one thing; passion is another. Passion I have ever conceived to be an honest, open, and manly emotion of the mind: arrogance, on the contrary, I take to be a cold, deliberate, thoughtful thing. I may have made use of warm or passionate language perhaps, but I was never guilty of the presumption and arrogance which has been imputed to me." (p. 158-9.)

There are some other considerations of a more general nature, which deserves notice in this argument. Sir Philip Francis is still living; and that of itself furnishes a ground of presumption. The improbability is great, that the real Junius should have died, and left

no trace by which to detect him. That he should have wished to be for ever unknown, is not likely; that he should have been able to elude all discovery, after his decease, is still less so. The curiously bound set of Letters which he had from Woodfall by his own directions, at once afforded a reason for believing that he intended to retain the means of proving his title at a distant period, and exposed him to detection after his death, if he allowed that event to happen before he declared himself. Sir Philip's appointment to India, is also extremely well accounted for, by the supposition that he was the author of Junius's Letters. That a clerk in the war-office should, without having done any thing to make him known, be sent out at once as a member of the supreme council, to which, for the first time, the powers of government were about to be intrusted, seems at any rate sufficiently strange to require an explanation. He was not connected by family with any man of weight in the ministry; he was wholly unknown at the India-house; he was equally obscure in the public eye; nor does it appear that he had any patron who interested himself in his promotion, previously to spring 1772, since, at that time, he was turned out of the office, to make way for a favourite of the minister in whose department he served. The next thing we hear of after this dismissal, is his mission to India as a satrap, in very critical circumstances. But there is nothing surprising in the appointment, if we suppose that he either suffered himself to be known, or was detected as Junius after his removal from the war-office; and that the minister, now made aware of his extraordinary talents, and of the risk to which they might expose him, recommended a step, justified by the qualifications of Sir Philip, and counselled by his own apprehensions. If the secret was only communicated to one man—if Sir Philip knew this, and made that one man personally responsible for its being kept—there was no doubt that it would be so. Nothing but an idle love of talking could lead to its being divulged. There was something in the nature of the transaction which imposed silence upon both the parties; and Sir Philip,

who had the chief interest in its concealment, was ready, during the whole life-time of the other party, to watch over his fulfillment of the compact.

If it is demanded why Sir Philip should have persisted so long in the concealment, a satisfactory answer may be given, without having recourse to evidence drawn from the character and habits of the individual. Some of the principal personages attacked by Junius have only been dead a very few years; the nearest relatives of many of them are still alive. The invectives of Junius against persons officially connected with Sir Philip, must have differed extremely from the letters which passed between them in the course of business, or in the intercourse of society. The circumstance of his appointment to India, the consequent silence of Junius, we may easily imagine to be a strong reason for reluctance to avow himself as the author. But if to these considerations we add, that Sir Philip has been, by the steady and honest course of his political life, thrown into habits of intimacy with the families of those whom Junius most unsparingly attacked, for their personal, as well as public conduct, in life, we shall be convinced that the discovery would at any time have been productive of far more pain than the gratification of vanity could compensate, even admitting the reputation of Junius to be much higher than that of Sir Philip, which we are not very sure that he is likely to think it, and are still less of opinion that he ought. He has long, in his proper person, possessed the admiration of all who have a due regard for unblemished public virtue, great talents and accomplishments. He might well afford to forego the applause of the multitude, which could only be purchased by a sacrifice, certainly, of the tranquillity so invaluable in the decline of life, possibly of the goodwill of some whose approbation he prefers to that of the crowd. Justice to this gentleman, as well as to the argument which we are now bringing to a close, requires the insertion of the powerful testimonies borne to his rare merits, by the unanimous voice of the managers of the impeachment. The following is a part of the letter which they addressed to him, when the House

of Commons, on account of his personal quarrel with Mr. Hastings, had excluded him from the committee.

“We have perused, as our duty had often led us to, with great attention, the records of the company, during the time in which you executed the important office committed to you by parliament; and our good opinion of you has grown in exact proportion to the minuteness and accuracy of our researches. We have found that, as far as in you lay, you fully answered the ends of your arduous allegation. An exact obedience to the authority placed over you by the laws of your country, wise and steady principles of government, an inflexible integrity in yourself, and a firm resistance to all corrupt practice in others, crowned by a uniform benevolent attention to the rights, properties, and welfare of the natives (the grand leading object in your appointment,) appear eminently throughout those records. Such a conduct, so tried, acknowledged, and recorded, demands our fullest confidence.

“These, sir, are the qualities, and this is the conduct, on your part, on which we ground our *wishes* for your assistance. On what we are to ground our *right* to make any demand upon you, we are more at loss to suggest. Our sole titles, we are sensible, are to be found in the public exigencies, and in your public spirit. Permit us, sir, to call for this farther service in the name of the people of India, for whom your parental care has been so long distinguished, and in support of whose cause you have encountered so many difficulties, vexations, and dangers.” p. 23, 24.

This letter was written by the chairman, Mr. Burke, and signed by himself and his colleagues; among whom we find the names of Fox, Sheridan, Windham, North, and Fitzpatrick. Mr. Burke, in one of his speeches upon the India Bills, has thus described him.

“This man, whose deep reach of thought, whose large legislative conceptions, and whose grand plans of policy, make the most shining part of our reports, from whence we have learned all our lessons, if we have

learned any good ones; this man, from whose materials those gentlemen, who have least acknowledged it, have yet spoken as from a brief; this man, driven from his employment, discountenanced by the directors, has had no other reward, and no other distinction, but that 'inward sunshine of the soul which a good conscience can always bestow on itself.' " p. 25, 26.

Having shown that all the evidence which can be drawn from a comparison of Junius's Letters and Sir Philip Francis's life and writings, points him out as the author—that there is no circumstance which does not tally with this conclusion, and no difficulty which it does not explain—we shall now very briefly advert to one or two particulars of evidence more strictly external than any which has yet been considered.

From several parts of the correspondence with Woodfall, it should seem that Junius frequently delivered the letters himself. When he employed another hand, we may be well assured it was that of a porter or other ordinary messenger, as was ascertained, in one instance, by Wilkes, who examined the person, and learnt that he received the packet from a gentleman. That he should intrust any body with his secret, for the mere purpose of conveying the letters, appears highly improbable; and to have given a packet for Woodfall to a friend to carry, would have been telling him the whole. Now, it seems that a gentleman of respectability, Mr. Jackson of Ipswich, was in Woodfall's employment at the period of the Letters;—and he states "that he once saw a *tall* gentleman, dressed in a light coat, with bag and sword, throw into the office-door, opening in Ivy Lane, a letter of Junius's, which he picked up, and immediately followed the bearer of it into St. Paul's Church-yard, where he got into a hackney-coach, and drove off."—(*Woodfall*, I. 43.) The author of the work before us states, that the figure and appearance of Sir Philip answers to this description as far as it goes.

There are various peculiarities of spelling which occur uniformly in both writers; and neither of them has any such peculiarity that is not common to both.

Thus, they both write "practise" with an *s*; "completely," instead of "completely;" "*ingross, intire, intrust,*" and many other such words, which are usually begun with an *e*—endeavor without an *u*—*skreen* with a *k*, and several others. There may not be much in any of these instances taken singly; but when we find that *all* the peculiarities that belong to either writer are common to both, it is impossible not to receive them as ingredients in the mass of evidence.

It is stated by a person who examined, with Wilkes, the form and folding of the letters received by him, that they both agreed in "thinking they could see marks of the writer's habit of folding and directing official letters."

Last of all, a careful examination has been instituted of the handwriting of Junius; and the specimens published by Woodfall have been diligently compared with letters of Sir Philip Francis. Those of Junius are known to be all written in a feigned hand; but its general character agrees well with that of Sir Philip's. Wherever, in the hurry of writing, (for example, where a word is interlined,) the natural hand, or something near it, breaks out, the resemblance is more complete; and certain peculiarities, preserved in the feigned hand, occur also in Sir Phillip's. We cannot follow the comparison through its minute details; but we are confident that it must go far towards satisfying those whom the rest of the argument may have failed to convince. Some of the more remarkable coincidences are as follows.

When Sir P. F. signs with his initials, he draws a short strong line above and below them. The very same lines are uniformly drawn under and over the initials with which Junius signs his private letters to Woodfall. In correcting the press, they both use, instead of the ordinary sign of deletion, a different and very peculiar sign, exactly the same in both. They both place the asterisk or star of reference to a footnote, at the *beginning*, and not at the *end* of the passage to which it belongs—contrary to what may be termed the invariable usage of other writers. They

both write the words *you* and *yours*, in all cases, with a large *Y*, the form of which is strikingly alike in both authors. They also use a half large *c* at the beginning of a word,—of a peculiar and characteristic formation. Their ciphers or numerals are all formed exactly on the same plan; as are most of their compound letters. Instead of a round dot over the *i*, they both invariably use an oblique stroke, sloping in the opposite direction to that of the general writing; and they mark their quotations, not by inverted commas, but by short perpendicular lines. They are both uniformly correct and systematic in the punctuation of their MS. Both write a distinct little *a* over &c.; and connect words divided at the end of a line, not by a hyphen, but a colon, which is repeated, contrary to general usage, at the beginning of the second line, as well as the end of the first.*

Before concluding this article, we must repeat, that the diligence of the author, whose work furnishes the materials of this argument, is very praiseworthy, and that the merit of the investigation belongs entirely to him. We cannot, however, avoid remarking, that he has frequently overloaded his book with useless and irrelevant quotations;—for example, much of the speeches of Lord Chatham, and of Sir Philip Francis's pamphlets; that he many times draws conclusions from such trivial resemblances in expression as prove nothing, —*e. g.* p. 236, 237, 235, 238—beside a variety of other instances; and that, in some places, he seems to lose himself, and goes on quoting and reasoning, without recollecting the point to be proved—as, where he compares a report of Lord Chatham's speeches, admitted to be made by Sir Philip, with the avowed productions of the latter, (p. 266, B. 25.)

* We understand that it is confidently stated in London, that still more precise evidence exists of the similarity of the hands, drawn from Sir Philips earlier penmanship.

NEUTRAL QUESTION.

[From the Edinburgh Review.]

THESE three pamphlets relate nearly to the same subject,—the discussions which have for about two years existed in form between this country and the United States, which have in reality, however, been growing up with the increase of the American commerce since the beginning of last war, and which have now come to the point of being speedily terminated, either by mutual concessions, or by an appeal to arms. It is peculiarly interesting as well as important, at this particular moment, to examine well the ground on which the parties are taking their stand; and we are not without hopes that there is yet time to remove the ignorance in which the public of both countries have been studiously

* The Speech of the Honourable J. Randolph, Representative for the State of Virginia in the General Congress of America, on a Motion for the Non-Importation of British Merchandise pending the present disputes between Great Britain and America. With an Introduction by the Author of "War in Disguise."

Concessions to America the Bane of Britain: or, the cause of the present distressed situation of the British Colonial and Shipping Interests explained, and the proper remedy suggested.

Oil without Vinegar, and Dignity without Pride: or, British, American, and West India interests, considered.

kept, until the voice of the multitude has seemed to decide for war. But it is not merely for its temporary interests that we have chosen to bring this subject fully before our readers upon the present occasion. There are questions of a general and permanent importance involved in the discussion; some of them, too, never yet treated of by writers on public law, nor ever, so far as we can discover, introduced by statesmen into their views of national policy or rights. The consideration of these topics is not only called for by the great ignorance which appears to prevail respecting them, but it is peculiarly adapted to the plan of a literary journal. We purpose, therefore, to examine at large the questions of public law and policy suggested by the present state of foreign and colonial affairs. The subject of neutral commerce, and, in general, the disputes between Great Britain and the neutral powers, are no doubt immediately connected with the situation of our West Indian colonies. We shall endeavour, however, to separate the latter from the more extensive subject; and shall examine it, in a subsequent article of this number, with the care which its extraordinary importance demands. We shall begin, at present, with noticing the three pamphlets whose titles we have prefixed.

The speech of Mr. Randolph is certainly the production of a vigorous mind. It abounds in plain and striking statements, mixed with imagery by no means destitute of merit, though directed by an exceedingly coarse and vulgar taste. But his arguments and opinions are of more importance than his rhetorical pretensions; for he speaks the sentiments of a respectable party in the United States. He maintains that a rupture with Great Britain is by all means to be avoided; that America is in much less danger from the preponderance of the English marine in 1806, than she was in 1793, from the coalition against France; that the French conquests have now reversed the policy of America towards Europe; and that the only barrier between France and a universal dominion, before which America as well as Europe must fall, is the British navy. He ridicules the conduct of those who would quarrel

with England for maritime rights, and at the same time truckle, or give bribes to Spain, the tool of France, after the greatest outrages had been committed upon the very territory of the Union. The cry for war, he says, is raised by the clamorous traders of the seaport towns,—men who cannot properly be said to belong to America, and who, at any rate, drive a commerce uncertain and transitory in its own nature, liable to be terminated at once by a peace in Europe, and much inferior both in respectability and solidity, to those regular branches of industry which consist in the cultivation or the exchange of American produce. He treats with still greater severity those who undervalue the losses and risks of a war with England. The transference of the carrying trade to whatever nation may remain neutral,—the ruin of American navigation by the British navy, without the possibility of gaining any equivalent by means of privateering,—the want of English manufactures,—the augmentation of debts and taxes,—the choice either of carrying on hostilities feebly, or of endangering the liberties of the country by strengthening the executive;—these calamitous effects of a rupture with England would, according to Mr. Randolph, make even the present champions of neutral rights repent of their violence, in six months after they should drive the government into a war.

Such, abstracted from a good deal of declamation, chiefly on local and personal topics, is the substance of Mr. Randolph's speech, which the able and eloquent author of "*War in Disguise*," the great leader of the argument on this side of the water, extols both for its own merits, and as a complete justification of his former predictions respecting the conduct of America in the dispute. This introduction, though very hastily prepared for the press, is, like all his other works, spirited and acute; but we must protest against quoting Mr. Randolph's speech, as any conclusive evidence of the probable conduct of the United States, or, indeed, as possessing any weight beyond the intrinsic value of the arguments which it contains. Mr. Randolph is the orator of a party professedly in opposition to the go-

vernment. His evidence respecting the bent of public opinion in America, is not much better than the assertion of an English disputant, who espouses the same side of the question; and although his party succeeded in throwing out the first violent measure which was proposed to Congress, it has since failed completely in opposing the more moderate, but determined proofs of irritation against England, which, being given by a great majority of the legislature, cannot surely be regarded as the clamours of a few adventurers in seaport towns, whom Mr. Randolph and his commentator are unwilling to call Americans.

With respect to the opinion maintained by Mr. Randolph as an American statesman, we are for the most part disposed to speak in favourable terms. He seems, indeed, to give nearly the same advice to his country, which has been offered to England by those distinguished political leaders, whose counsels, if followed, would have saved Europe from the dreadful calamities of the present war. To cultivate a friendly intercourse with all their European customers, but, if forced to choose in such a crisis as this, to prefer the alliance of England, and to make considerable sacrifices, rather than go to war at all, appears to be the soundest policy for the Americans. But we cannot help observing, that Mr. Randolph has gone a great deal too far in depreciating the importance of the carrying trade now in the hands of his countrymen. Admitting that the American merchant merely performs the part of what has been termed "a neutralizing agent;" that he purchases on a long credit in the French or Spanish Islands, and then sells in Europe on a shorter credit, or merely carries the colonial produce circuitously from the plantations to the planter or his consignee—thus effecting the transport of other men's goods without any adequate capital of his own,—does it follow that this is an unprofitable line of employment? Rather, is it not the very traffic of all others the most gainful to speculative merchants? A person of a very small capital, is, in this manner, enabled to share in the profits of large capitalists. He is repaid exactly as the consignees of our own

West Indian planters are. Then, as to the persons so engaged being adventurers of no substance or respectability, we presume there must be a considerable mistake. How comes it that such persons enjoy an unbounded credit with the planters and their agents in Europe? How have they contrived to purchase, according to some statements, the whole French and Spanish shipping,—according to all accounts a very large proportion of it? After above twelve years of such lucrative practices, are they still needy adventurers? By the American public accounts, it appears, that in the year ending September, 1806, the foreign goods exported from the United States, exceeded sixty millions of dollars in value. If they who began so large a traffic were once mere agents trading for a commission, they must now have become capitalists; and as the whole remaining exports of the country fall short of this by about nineteen millions, we may easily conjecture how great a proportion of the mercantile men are engaged in it, and how many of the commercial fortunes are derived from this quarter. About half of this branch of commerce, belonging to the French and Spanish colonies, is what England wishes to lop off, in order to hurt her enemies, who profit by it as well as the Americans. Can she be much surprised, if those who are to be entirely ruined for the purposes of British policy, should endeavour by all means to prevent such a blow from being given? or, that other members of the community, who are but little injured by it, should still make common cause with their countrymen? It is, no doubt, the interest of the Americans not to quarrel with England, and it was still less their interest to rebel against her thirty years ago. By a rupture, too, they would infallibly lose the very object for which they threaten hostilities, besides incurring a great many other losses. But if such considerations had any weight in the councils of states, war would be banished from the world; for a declaration of war, whatever be its motive, never fails to ensure in the mean time a repetition of the offence which provoked it. But by defeating the enemy, which is always expected, a stop may, in the end, be put to

the evil. Just so may the Americans argue. They may hope to establish for the future the rights which they now claim, and may rather choose to fight for them, at the risk of losing more, than give them up without resistance.

The second pamphlet now before us, is written by a gentleman engaged in the West India trade, and, by its minute coincidence in several of the details with the evidence of Mr. Maryatt before the West India committee, appears clearly to be the production of that gentleman. It is well written, and shows the author to be practically acquainted with his subject. It exhibits marks of acuteness, too, in reasoning, which we are convinced would have led him to sounder opinions, had his mind been free from the bias of his professional habits, and indeed, interests. After describing the distressed state of the West India proprietors, (a task unhappily too easy,) the author imputes it entirely to the surrender which England has made of her maritime rights. He speaks in a very declamatory manner, of giving up to America now, what we refused to the armed neutrality when our naval power was much more limited; as if the discussions of 1780 and 1801, had the least connexion with the points now in dispute.* He replies, at some length, to the arguments upon the present question delivered in the "*State of the Nation*;" but, as a specimen of his success in the controversy, our readers may take the following. It had been maintained, that it was sufficiently detrimental to the enemy, to make him receive his colonial produce by a circuitous instead of a direct voyage. "No," says Mr. Maryatt, very triumphantly; "the fact is, that notwithstanding the double voyage, our enemies have their sugars transported from 8s. 11d. to 12s. 6d. per cwt. cheaper than we can carry ours to the same market." But has he forgotten, that we too must carry our produce there by

* The only question then moved by the northern powers which can be supposed to have any allusion to the rule of the war 1756, is that of "*Free ships, free goods*;"—but the rule was in that war maintained against the Dutch, to whom we, nevertheless, admitted the latter principle in virtue of the treaty of 1674.

a circuitous voyage? And can he deny, that however great the difference between our war expenses and theirs may be, still there remains a great difference between their war and their peace expenses?—and this difference they owe to the war and the loss of their maritime power. The only answer given to the very important argument, that France, by transferring her trade to neutrals, loses the nursery of her navy, is a sort of assertion, that Britain is doing so herself by the interference of the Americans, contrary to every statement of our commerce and navigation which possesses any claims to authenticity, and in utter contempt of the very obvious consideration, that the Americans never can breed or shelter sailors who shall afterwards man the French navy, while England is sure of receiving a large supply of American seamen, and a return of her own who have been employed there, as soon as the war is at an end. For one thing, we must give this author the praise due to frankness and candour; he fairly states, that the object which he proposes in blockading the enemy's islands, or rather in stopping entirely their commerce with the Americans and other neutrals, is to ruin their cultivation, and force the proprietors to turn part of their sugar and coffee plantations into provision grounds. This he thinks the best way of relieving our own planters. We shall in the sequel of the present article, and in examining the West India question, have occasion to consider this project more at length.

The title of Mr. Medford's pamphlet is by much the worst thing we have found in it. The saying about the effects of an ill-name, applies to books as well as other objects; and we fear that this tract will suffer greatly from a circumstance almost wholly irrelevant to its merits. It is in truth one of the most sensible political essays that have lately appeared, far exceeding any other which has been produced by the present differences, in the rare qualities of candour and impartiality. The general doctrine of Mr. Medford is, that both England and America are deeply interested in remaining at peace,—that the government and the most respectable part of the people in each country are averse to war,—

but that certain individuals on both sides, have contrived to raise an outcry for hostile measures, and to engage the rabble in its favour. He maintains, that each party should carefully examine, not merely what is its right, but what rights it has really an interest in asserting; that there should be mutual concessions of the unimportant points, and that a stand should be made for the objects of consequence only. This view of the matter leads him to consider the value of the things claimed on both sides; and he is strongly inclined to depreciate them. With respect to seamen escaping from the English navy, under the colour of American citizenship, he is at a loss to imagine how this evil can be remedied. There was a disposition to quarrel at Norfolk, he admits, which produced the offensive parading of the deserters; but if this had not taken place, the men would have privately gone up the country, and embarked elsewhere, without the possibility of detection. The right of the mother country to monopolize the colonial trade so as materially to injure the colonists, he stoutly denies. That she may tax, and legislate for them, he does not at all dispute; but he is unable to discover any principle upon which she can be entitled to starve her colonial subjects, for the sake of enriching her merchants at home, by the monopoly of the produce. Make the planter pay, he observes, as much as he now pays to government, but relieve him from the extortions of the broker and merchant. To every interference with the navigation law, he expects the keen opposition of all West India ship-owners; but the clamours which they will raise about the ruin of our marine, he thinks, are easily exposed by the statement, that of 21,700 ships, composing the mercantile navy of England, only 785 are engaged in the West India trade. The effects of the navigation law, he conceives, are greatly overrated; and, so far from valuing the power of stopping a trade in contraband of war, he asks, when the want of stores ever kept an enemy from fighting? At the same time, he observes that the enemy has no right to complain of our maritime claims. Towards him every exertion of our hostility is justifiable; and he

has no title to intermeddle with exceptions which it is the part of neutrals only to take against our conduct. He illustrates, by various cases, the embarrassments of the neutral traders, and their mercantile connexions in England, from the frequent detention of vessels by our cruizers; and shows how many houses in both countries are ruined, even when the prize courts at last refuse to condemn the cargoes. He also enlarges upon the inconsistency of throwing such impediments in the way of the American trade, when licenses are all the while granted with profusion to secure both our traders and those of neutral states in their commerce with the enemy's ports. He enters into several details for the purpose of showing how greatly the expenses of the American trade with the West Indies are augmented by the regulation forcing the carriers of colonial produce to land and reship it in their own ports, and how frequently this interrupts the whole plan of a mercantile speculation. Mr. Medford has been, for many years, engaged in this trade; and from the uncommon calmness of his general reasonings, we are disposed to pay great respect to his authority upon this point.

The remaining part of the tract is occupied with a comparative statement of the consequences of a war between England and America, to the interests of both countries. The progress of America in wealth and improvement, hitherto rapid beyond all example, and accelerated by the wars of other nations, would now receive a most material interruption. Her commerce would be nearly destroyed, by the exclusion of her vessels from our ports, and their capture at sea when bound for other places. Her coasts, too, would suffer from the English navy. Her revenues must be raised to the war establishment; and both her debt and taxes greatly increased. Our author farther admits, that she could derive no relief whatever from the profligate measure sometimes debated, of confiscating the debts due to British merchants. He asserts, that if a balance were struck, there would be found more money due in England to the Americans than by them, from the amount of their exports directly to the British dominions, and

the shares which our traders have in the other branches of American commerce. Mr. Medford then enumerates the advantages which his countrymen might derive from the war. They might easily conquer Canada, the inhabitants of which, though unfavourable to America, dislike England as much. To be sure, no great benefit could result from this accession; but it would materially injure the navigation of the English in those seas, and interrupt their supplies of ship-stores. By their privateers they might almost destroy our West India trade; and though this would offer but a poor compensation for the loss of their own commerce, it would tend greatly to make England tire of the contest. They would also have the supply of the West Indies so completely in their hands, that they could occasion an insurrection in every island, by stopping the carriage of provisions;—another exertion of power, which our author candidly admits, would only injure the enemy, without any benefit, nay, with much detriment to themselves. Of the various effects which the war would produce, the destruction of the American carrying trade would alone be beneficial to England. The loss of her North American colonies,—the danger of her West Indian settlements,—the want of a market for her goods,—the interruption of part of her supplies of grain, and of about half the cotton used in her manufactures,—the depredations upon her trade by innumerable privateers,—the defalcations which all these losses would occasion in her revenues,—are considerations of so serious a nature to a country already engaged in almost universal war, bent down by debts and taxes, and maintaining with difficulty its commercial station, that our author views them as fit to deter the most resolute enemies of the American carrying trade. He concludes, by attempting to strike a sort of general balance between the losses which the two countries would sustain, and affirms that England would suffer most; that to America the war would certainly be extremely injurious; but that to England it must prove ruinous. The former has done without commerce, and may try the experiment once more. The latter with difficulty survived that crisis,

and is now incomparably less able to meet it. We confess, that the question of, "which will be most injured, by measures confessedly very detrimental to both," strikes us as infinitely immaterial. There is no reason whatever for preferring a war which shall injure your enemy more than yourself, to one which shall injure him less, except the difference be so enormous, that, in the one case, he is likely soon to be in your power, or at your mercy;—a difference which, in the present instance, neither party can venture to assert. The short and plain view of the case, which we think ourselves entitled to adopt, is, that both nations would suffer more from a war than from any other event which can happen to them;—that it is their common interest to avoid it;—and that the points chiefly in dispute between them, are either such as justice requires to be abandoned, or a regard for their best interests should prevent them from insisting upon. We shall now illustrate this proposition, by examining the questions alluded to, and shall begin with the new claim urged on the part of England, of a right to search ships of war for seamen, both because this has never been argued, and because it will in all probability be made the avowed ground of the rupture.

It is evident, that the right to search a foreign vessel for deserters is of the very same nature, and governed by the same rules, with the right to search a neutral vessel for contraband goods. You have a right to search for those goods, only because you are injured by their being on board the vessel which trades with your enemy;—you have a right to search for your own runaway seamen who take shelter in the vessel, because you are injured by their being enabled to escape from you. If a neutral carries contraband goods, such as armed men, (which indeed treaties frequently specify in the list,) to your enemy, he takes part against you; and your remedy—your means of checking his underhand hostility, is to stop his voyage, after ascertaining the unfair object of it. If the same neutral gives shelter to your seamen, he takes part with your enemy; or, if you happen not to be at war, still he injures you; and your

remedy, in either case, is to recover the property, after ascertaining that he has it on board. In both instances, the offence is the same,—the foreign vessel has on board what she ought not to have consistently with your rights. You are therefore entitled, say the jurists, to redress; and a detection of the injury cannot be obtained without previous search.

If the foreign vessel is a ship of war, such conduct is a direct injury, committed by the government of one nation against another nation. For if an American frigate either carries troops or other contraband to France, or carries away deserters from an English man of war, and refuses to give them up when claimed; and if the American government avows the proceeding of its ship, then is that government acting an hostile part towards England, who has, in consequence, a right to seek redress,—namely, by going to war. For all such proceedings, therefore, on the part of the foreign government, there is this proper and sufficient remedy. But if the offending vessel belong not to the foreign government, but to a private trader, the case is different. For no power can exercise such an effective control over the actions of each of its subjects, as to prevent them from yielding to the temptations of gain, at a distance from its territory. No power can therefore be effectually responsible for the conduct of all its subjects on the high seas; and it has been found more convenient to entrust the party injured by such aggressions, with the power of checking them. This arrangement seems beneficial to all parties; for it answers the chief end of the law of nations,—checking injustice without the necessity of war. Endless hostilities would result from any other arrangement. If a government were to be made responsible for each act of its subjects, and a negotiation were to ensue every time that a suspected neutral merchantman entered the enemy's port; either there must be a speedy end put to neutrality, or the affairs of the belligerent and neutral must both stand still. If the suspected vessel is a ship of war, no such inconvenience can follow from seeking redress by negotiation merely. A neutral has very few ships of war; if she has many,

this is a circumstance of evidence against her, and a good ground of complaint. Not only is this remedy easy and safe to all parties, but it is the only remedy which is not exceedingly liable to abuse, and full of danger to the public peace of nations. No serious consequences are likely to arise from allowing men of war to search merchant ships; more especially if the right is confined to vessels of the state, and withheld from privateers. Nothing but hostility can result from allowing one ship of war to search another ship of war; because, if the national spirit is any where to be found, it is on board of such vessels. Moreover, the injury done to a private trader by searching is insignificant, compared to the benefit secured to both nations by such a practice. But the injury done to a ship of war by searching, is both much greater in itself, from the insult to the honour of the crew, and bears a much greater proportion to any good which can be supposed to result from the practice, even on the highest estimate, because there are very few such vessels to search.

For these, or similar reasons, the right of searching private ships has been acknowledged by the law of nations; but no such right has ever been admitted by that law with respect to ships of war. The following details not only prove this point, but positively demonstrate, that the claim alluded to is repugnant to the law of nations.

The right of searching merchant ships has never been denied, except by a few very speculative men. But such a modification of it has been more than once proposed by different powers, as would almost have amounted to an extinction of it. In 1780 and in 1801, it was maintained that the presence of a ship of war protected from all search a fleet of merchantmen under its convoy. This position was founded upon the inviolability of the national flag, and upon the pledge of fair dealing on the part of the merchantmen, which the presence of the convoying ship, and the word of its commander afforded. This pretension of the neutral powers was carefully examined, chiefly by English civilians, who were unanimous against it, and displayed great

learning in refuting it. They reasoned both on the general consequences of extending to merchantmen the protection of the convoying flag, and from the authority of the writers on public law. Not one of their general reasonings even alludes to any right of searching the convoy ship itself, although an argument of this nature would have cut the whole question short. Not one of their authorities makes any mention of such a kind of search, although a quotation of this nature would have been the best authority against the pretensions of the armed neutrality, at a time, too, when our jurists were in no small degree pressed for authorities, even to make out the right of searching ships under convoy.* See *Sir W. Scott's Judgment in the Case of the Swedish Convoy—Dr. Croke's Remarks on Mr. Schlegel's Work—Letters of Sulpicius—Lord Grenville's Speech on the Russian Treaty, (Nov. 1801.)—Vindication of the Russian Treaty.*

The treaty with Russia, in our humble opinion, very properly refused to acknowledge the pretensions of the armed neutrality. If there is any truth in the reasons above stated for searching merchantmen not convoyed, it must be admitted, that the presence of the convoy ship, so far from being a sufficient pledge of their innocence, is rather a circumstance of suspicion. If a neutral nation fits out many ships of war, and escorts all its trading vessels with them, we have a right to conclude, that she is deviating from her neutrality. If her trade has been exposed to injuries, redress might have been sought by negotiation; and certainly it would be incumbent on her to show, in the course of this negotiation, either that the old rule had been abused, or that some new one should be substituted in its place. The presence of the convoy gives scarcely any better security to the belligerent, than the mere existence of the general

* It may farther be remarked, that, in the course of the discussions arising from the armed neutrality, several authorities were produced, (certainly not very eminent ones) even in favour of the neutral pretension; but no one was found expressly against it. So little do the writers on this subject afford countenance to the doctrine of a still more extended right of search!

law against contraband, while it exposes the neutrality of the parties to new risks of being destroyed. The article in the Russian Treaty which reserves the right of search, prescribes a visit to the convoy ship; but this is a concession to the neutral, to preclude, except in certain cases, any farther search. In this visit, the papers relating to the merchant ships are the only subjects of inquiry. (See *Russian Treaty*, June, 1801, Art. IV.)

If we examine the authorities themselves, we shall find reason to be satisfied, that the learned persons who maintained the argument for the belligerents, were guilty of no oversight in omitting to support their positions by asserting the right now claimed.

Wherever the right of search is mentioned, either by writers on the law of nations, or in treaties, *merchant-ships* are expressly specified. For the most part, this description is repeated every time the thing is mentioned; but it is always given so often, as to leave no doubt whatever, that it is understood; where, by accident, or for the sake of brevity, it may have been omitted; or this is rendered equally clear, by the mention of *owners, subjects, &c.* See *Consolato del Mare*, cap. 273.—*Treaty of Whitehall*, 1661, Art. 12.—*Treaty of Copenhagen*, 1670, Art. 20.—*Treaty of Breda*, 1667, Art. 19.—*Treaty of Utrecht*, 1713, Art. 24; of *Commerce with France*, 1786, Art. 26. & *seqq.*—*Treaty with America*, 1795, Art. 17, 18, 19; and all others, where the right of search is mentioned.—*Vattel*, liv. 3. chap. 7. § 113 & 114.—*Martens, Essai concernant les armateurs*, c. 2. § 20.—*Hubner, de la saisie des Batiments Neutres*, Vol. I. part 1. ch. 8. § 7.—*Whitlock's Mem.* p. 634.—*Molloy de Jure Mar.* Book 1. chap. 5.

The pretension of visiting ships of war, has never been brought forward, so far as we know, except accidentally in the two cases which shall presently be mentioned; and in these it was given up, before time had been allowed for discussing the subject. This is the reason why no direct authority can be found upon the point, in writers on the law of nations, and no stipulation respecting it in treaties. But all the general principles which are recognised, both by authors and nego-

tiators, most uniformly and positively exclude such a pretension. *

It is necessary to prove, that the *territory* of an independent state is inviolable, and that no other state has a right to enter it without permission. Vattel lays down this principle as follows. “Non seulement on ne doit point usurper, le territoire d'autrui, il faut encore le respecter et s'abstenir de tout acte contraire aux droits du souverain; car *une nation étrangere ne peut s'y attribuer aucun droit.*”—“On ne peut donc, (he infers,) sans faire injure à l'état entrer à main armée dans son territoire pour y poursuivre un coupable et l'enlever.”—*Liv. 2 Chap. 7. § 93*, see also § 64 & 79. All other writers, without exception, agree in this; and it is a common stipulation in treaties of peace,—not that one party shall refrain from pursuing criminals into the territories of the other, for this would be superfluous,—nor that one party should have the right to pursue criminals in the other's territory, for this never was granted in any one instance,—but that the parties shall themselves mutually give up the persons of certain criminals who may take refuge in their territories; both the contracting parties thereby admitting, that the state from which the criminal escapes has no other means whatever of recovering him, and that he is under the power of the state alone into whose territory he has fled.

That the same principle of inviolability applies fully to the ships of a nation, and that these floating citadels are as much a part of the territory as if they were castles on the dry land, is another position equally incontestible. In what particular, at all essential to the argument, do those vessels differ from forts? They are the public property; held by men in the public service, and under martial law. Moreover, the supreme power of the state resides in them; the sovereign is represented in them, and every thing done by them is done in his name. Accordingly, we find that those vessels of war are held by writers on public law to carry with them an extension of the territorial rights of the state. Vattel says expressly, that the territory of a nation comprehends every part of its just and lawful

possessions; and he adds, "Et par ses possessions il ne faut pas seulement entendre ses terres, mais tous les droits dont elle jouit." (II. 7, § 80.) In another part of his work, indeed, speaking of the *status* of children born at sea, he lays it down, that if they are born in a vessel belonging to any country, "ils peuvent être réputés nés dans le territoire; car il est naturel de considérer les vaisseaux de la nation comme des portions de son territoire, surtout quand ils voguent sur une mer libre, puisque l'état conserve sa juridiction dans ces vaisseaux."—(*Liv. I. chap. 19, § 216.*) But if this means any thing more, in so far as it applies to merchant ships, than that they are parts of the territory of the country to the effect of rendering the children born on board natives of the country, it is inconsistent with the admission made by Vattel in another chapter, that merchant ships may be searched,—unless, indeed, we are to admit, that although those vessels are parts of the territory, yet the general convenience of nations has established the right of violating them, for the reasons formerly stated. Vattel farther lays it down, that children born at the army, or at the residence of an ambassador, are in the same predicament; "car un citoyen absent pour le service de l'état, et qui demeure dans sa dépendance et sous sa juridiction, ne puet être considéré comme étant sorti du territoire."—*Ibid.* § 217.

But the authority of Grotius is, in every respect, better entitled to regard than that of the above mentioned writer, whom, indeed, we have only quoted, because it is the custom to appeal to him on all occasions, and because he is exceedingly favourable to the claims of belligerents. Grotius lays it clearly down, that sovereignty over a portion of the sea (*imperium in maris portionem*) may be acquired, like other sovereignties, in two ways—"ratione personarum, et ratione territorii; ratione personarum, .ut si classis, qui maritimus est exercitus, aliquo in loco maris se habeat; ratione territorii, quatenus ex terra cogi possunt qui in proxima maris parte versantur, nec minus quam si in ipsâ terrâ reperirentur."—(*De Jur. Bel. & Pac. Lib. II. cap. 3, § 13.*) Here, then, we find that the sea, upon which a

ship of war lies, is as much under the dominion, and part of the territory of the nation to which that ship belongs, as the sea under the guns of one of its forts, or within gunshot of its shores. "The vessel," said Grotius, "occupies the sea for its sovereign, in the same manner as an army does the land on which it encamps." If an Austrian army is marching through Prussian Poland to attack the French, and a Russian army encamps near it, on its march towards Turkey; should we not reckon it an act of direct hostility, were a detachment of the former to enter the camp of the latter forcibly, in order to search it for deserters? An English and American ship of war meeting on the sea, which is common to both, are exactly in this relative situation. *Classis maritimus est exercitus*—says Grotius. If the presence of the ship of war converts the neighbouring sea into national territory, much more is the ship itself to be viewed in that light.

There are several analogical cases in the law of nations, which add great weight to this doctrine, as applied to the inviolability of ships of war. It may be enough to mention the rights of ambassadors. The inviolability of their houses and persons has long been admitted in its fullest extent by all jurists, and by the practice of all civilized nations without exception. They cannot be arrested for crimes; nor can they, or their suite, be affected, either in their persons or goods, for debts. They are not held to be within the jurisdiction of the country in which they reside; and all attempts to touch them, even by the modes which the law of the land prescribes, are offences against the law of nations.—*Vattel*, liv. iv. chap. 7, & 8.—*Grotius*, *De Jur. Bel. & Pac.* xviii. 4, 4.—See, too, the English stat. 7, Anne, c. 12, which is only *declaratory* of the law of nations.—Now, there is not one reason for the inviolability of ambassadors, which does not apply to national ships. Whether we deduce that inviolability from respect due to the representative of a sovereign,—from the presumption that the sovereign never intended to submit his minister to a foreign jurisdiction,—from the necessity of entire independence to the transaction of

the business committed to him,—or from the risk in which a contrary doctrine would involve the mutual good understanding of nations;—it is clear, that all these topics apply to the case of ships of war, and several of them with much greater force.

A consequence of peculiar absurdity, and repugnant to every principle which jurists have laid down, would follow from admitting the right of nations to search each other's ships. If the search of a neutral vessel leads to the discovery of contraband; or, if it is resisted, when it is the right of the belligerent vessel,—then the former is detained, and brought into port for condemnation. But can it be maintained that a court of admiralty is to sit in judgment upon the mutual claims of sovereign states? The captor, indeed, may acknowledge its jurisdiction; but can a foreign and independent sovereign be required to do so? All jurists agree that there is no human court in which the disputes of nations can be tried; that every power is the sole judge of its own cause; and that, if aggrieved, it has but one remedy, viz. war. To prove this by quotations, would be endless.—In the case of private ships, the law of nations is explicit. The prize courts of the captor's country judge, according to that law, the questions which arise between the parties; and it is a usual thing to declare, by express stipulation, that this jurisdiction shall be exercised. (See c. 9. Treaty of Paris, 1763, Art. 16, and of Versailles, 1783, Art. 21, and Treaty of Com. 1780, Art. 32, 33, 34, & 35.) But no treaty ever alluded to such a jurisdiction over ships of war detained and brought into port. In the case of private ships, the jurisdiction thus constituted by the law of nations, and recognised by treaties, is an arrangement generally convenient, and called for by the right of search, upon which it is a necessary check. The total silence of all authorities and treaties respecting such a jurisdiction in the case of national ships, and its direct repugnance to the general principles laid down, without any such exception, by all writers, is the clearest proof, that the right of search and detention is equally inapplicable to the case of national ships. If this right existed by the law

of nations, the only conceivable mode of legally controlling its exercise would not be so entirely repugnant to the principles of that law.

But some thoughtless persons have maintained, that Great Britain has a right to search ships of war, in virtue of her naval supremacy; and they have attempted to connect this pretension with the old claim of a sovereignty over the sea. We shall therefore briefly advert to that question.

The doctrine, that the sea may be appropriated by a people beyond the portion of it immediately adjoining to their territory, and commanded by that territory, has been denied by the bulk of authorities on the principles of the law of nations. Grotius scarcely admits more than the possibility of appropriating the waters immediately contiguous; though he adduces a number of quotations from ancient authors, (after his usual manner) which show only, that such an idea, at some time, had entered somebody's head,—the common defect of his mode of treating a subject. For example, he quotes the passage where Virgil says of the Romans, “*Qui mare, qui terras omni ditioe tenerent,*” and the complimentary verses of Oppian to the emperor, telling him that “the sea rolled under his laws,” (*De Jur. Bel. & Pac. II. 3. § 8—13.*) But he never dreamt of any thing more than a limited portion being claimed, and he uniformly speaks of “*pars or portio, maris,*”—always confining his view to the effects of the neighbouring land in giving a sovereignty of this sort. Puffendorff lays it down, that in a narrow sea, this dominion belongs to the sovereigns of the surrounding land, and regulates the distribution of it, where there are several such sovereigns, by the same rules which are applicable to neighbouring proprietors on the lake or river, supposing that no compact has been made in favour of one by the rest, as is pretended, he says, by Great Britain. But he expresses himself with a sort of indignation at the idea, that the main ocean can ever be appropriated. “*Nullus probabilis prætextus,*” he says, “*adferri potest quare unus aliquis populus in totum oceanum dominium velit prætere, cum hoc effectû ut cæteros omnes a*

navigacione ejusdem velit arcere." The whole passage is very eloquent, as well as judicious and satisfactory. (*De Jur. Nat. & Gent. Lib. IV. cap. 5. § 7.*) Selden devotes the first book of his celebrated treatise, to the proposition, that the sea may be made property; which he attempts to show, by collecting a multitude of quotations from ancient authors, in the style of Grotius, but with much less selection. For example, he quotes Julius Firmicus, who says, in his astrological work, "that persons having, in the schemes of their nativity, the moon increasing in the 30th degree of Taurus, fortified with a friendly aspect of Jupiter, shall possess the dominion of sea and land whithersoever they lead an an army." *De Mare Clauso, B. I. c. 14.*) He nowhere grapples with the arguments by which such a vague and extensive dominion is satisfactorily shown to be repugnant to the law of nations. And in the second part, which is indeed the main object of his work, he has recourse only to proofs of usage and of positive compact, in order to show that Great Britain has the sovereignty of what are called *the narrow seas*. In this part of his argument, he is more successful, and has had more followers. In truth, it does appear, that, from her great maritime superiority over all neighbouring nations, Great Britain, from very remote ages, enjoyed a pre-eminence upon the seas surrounding her territory to a considerable distance; and this was naturally increased by her extensive possessions on the opposite shores. The most important documents brought to prove this, are the *Ordinance at Hastings* in the 2d of King John, and the record of the dispute between Edward I. and Philip the Fair, in which deputies from several maritime states, themselves parties in the discussion, took the part of England, and admitted her claim.* (*Selden, B. II. & Molloy de Jur. Mar. B. I. c. 5.*) The claim comprehended, at the utmost extent in

* England and the other states were neutral in the war between France and Flanders which then subsisted, which gave rise to the claims of all those states, except England. No decision was given by the arbiters who were named on the both sides.

which England ever stated it, the sea from Cape Finisterre to Cape Stat in Norway. France never subscribed to it. When Holland, at the beginning of Cromwell's Protectorate, denied it for the first time, she was repeatedly defeated in the war which ensued, and was effectually humbled. The treaty, 1654, by a declaratory clause, fixed the utmost amount of this claim which Holland could be induced to admit. No mention is made of sovereignty even of the British sea, although Cromwell proposed that this should be generally stated; but the ceremony of striking the ensign, and lowering the topsail, is stipulated on the part of "all Dutch ships of war, and others, which shall meet any British ship of war *in the British seas*—*co modo quo ullis retro temporibus sub quocumque anteriore regimine* unquam observatum fuit.*" (*Treaty of Peace and Alliance*, 1654, *art.* 13.) The same article was, from this treaty, copied into the Treaty of Whitehall, 1662, *art.* 10. and the Treaty of Breda, 1667, *art.* 19.

When Charles II. being resolved to make war on the states-general in 1671, sought for pretexts, and had recourse to some of the most groundless complaints,—as, that a Dutch fleet of war, on the Dutch coast, had refused to strike to an English yacht, (which had been sent for the purpose of creating the dispute)—no farther claim was ever thought of than this absurd interpretation of the right of salute. The treaty of Westminster, which put an end to that war, merely stipulated the honours of the flag in terms of the former treaties. (*Treaty of Westm.* 1674, *Art.* 6.) The treaty of Marine, concluded at London the same year, determined that *the British seas* extended "from Cape Finisterre to the land Van Staten in Norway," (*Art.* 4.) These, with the intermediate treaties of 1678 (Defensive,) 1689 (of Concert,) and 1701 (of Alliance,) as well as the treaties of Breda, 1667, and the Commercial Treaty of 1668, (by which England first admitted to Holland the princi-

* This refers to the pretext on which the Dutch had refused the honour of the flag, viz. that the salute was a compliment to the king, and not due to the commonwealth.

ple of "free ships, free goods," and *vice versa*, art. 9, 10, 11,) were all renewed by the treaty 1703, and formed the terms upon which the alliance between England and Holland subsisted, until the latter part of the American war. The treaty of Paris between England and Holland in 1784, contains a renewal of the stipulation respecting the flag, though in more general terms, placing this point "upon the same footing on which it stood before the war." (Art. 2.) The Treaty of Amiens, 1802, contains no general renewal of former treaties, and no stipulation whatever touching the honours of the flag.

It is therefore manifest, that, in so far as the intercourse between England and Holland contains the evidences of this right of sovereignty over the sea, the following points are proved: That the *British seas* never extended beyond Cape Finisterre on the one hand, and Cape Stat on the other; that the claim never extended beyond the British seas; that it was admitted by the Dutch to have been well founded originally, and not to have been constituted by the treaty 1654; that it has never extended to any other right than that of the salute; and that even this right of salute was abandoned in 1802.

Some writers pretend, that the salute is only one consequence, or more properly an acknowledgment, of a general sovereignty; and enumerate other rights,—as of fishing, imposing customs on the navigation and fishing of foreign nations, and prescribing laws to the navigation of nations living on the banks of the British sea. But the only instances of such rights ever being exercised, are very ancient, if not doubtful; if we except a tradition of Queen Elizabeth having prevented the French from building above a certain number of ships of war,—which is rather to be viewed as an exercise of power by means of threats, than an exercise of right. (*Molloy de Jur. Mar.* I. 5.) At any rate, all such pretences have long been given up. As far back as 1604, the proclamation of James I. shows that the jurisdiction anciently claimed, was now confined to those bays called the *King's Chambers*, i. e. portions of the sea cut

off by lines drawn from one promontory to another of our own island. (*Selden, II. 22.*) The claim of salute itself, never was admitted by France; and Vattel expressly lays it down, that this is sufficient to disprove the existence of the right. (*Liv. I. c. 23. § 289.*) If the admission of it by other nations proves any thing, we must allow that the Venetians had the same right in the Adriatic, the French in the Mediterranean, and the Danes in the North Sea. The first has been repeatedly acknowledged both by the Turks, the Neapolitans, and the Spaniards. The honours of the flag were expressly admitted to France in the Mediterranean, by the Dutch, in the Offensive and Defensive Treaty of 1635. And Selden himself, proves that Denmark has always possessed the sovereignty of the North Sea, Britain, having only what the Civilians call a *servitude* on it. (II. 52.) It is unnecessary to add, that our right never was acknowledged by America, although we have had two treaties with her; and that, in whatever way either question may be decided, no two points can be more foreign to each other, than the right of search now claimed, and the ancient claim of naval supremacy.

We have said above, that there are only two instances, so far as we know, of the idea of searching ships of war having been entertained; and, in only one of these, was the claim formally made. The history of both these cases, affords the strongest confirmation of the doctrine for which we have been contending.

The war of 1652, was the first rupture which had taken place between England and Holland, since the foundation of the republic. It arose entirely from maritime rivalry; and a refusal of the honours of the flag, was even the avowed justification of the first hostilities on the part of England. The Dutch were defeated in many great naval engagements; their fisheries were interrupted, their commerce nearly ruined, and they were willing to have peace on almost any terms. England demanded, in the 15th article of a treaty proposed to the states in 1653, that the salute of the flag should be stipulated, from all vessels, both "of war and others, in the British seas, and that all vessels should likewise

submit to be visited, if thereto required." The former stipulation was acceded to, and made part of the treaty concluded in 1654, (Art. 15,) the latter was peremptorily refused. No article respecting search was inserted; and in the subsequent Treaty of Commerce of London, 1674, the reciprocal right of search for contraband was stipulated, but confined to merchant ships. (Art. 5.) All that Cromwell could think of asking, then, after beating the Dutch to nearly entire submission, was a right to visit ships of war in the British seas. But, beaten as they were, the Dutch could not be brought to admit so monstrous a claim;—it was immediately given up, and never afterwards renewed.

Soon after the peace of 1654, a Dutch man-of-war, convoying a fleet of merchant ships, was met by an English man-of-war in the Downs. The English searched the merchantmen; and the affair was discussed by the states under two heads,—the search of ships of war—and the search of merchantmen; the former question appearing to have been suggested by the latter, and by the presence of the Dutch man-of-war. The result of their deliberations, was a resolution, that "the refusal to let merchantmen be searched could not be persisted in;" but, respecting the other point, they came to the following determination. "That in conformity with their high mightinesses' instructions, taken in respect to the searching of ships of war, and especially those of Sept., 1627, Nov., 1648, and Dec., 1649, it is thought good, and resolved, that all captains, and other sea-officers, that are in the service of this state, or cruising on commission, shall be *anew* strictly commanded, told, and charged, that they shall not condescend to no commands of any foreigners at sea, much less obey the same; neither shall they any ways permit that they be searched; nor deliver, nor suffer to be taken out of their ships, any *people* or other things." Punishments are then threatened to such officers as yield on this point; but they are desired to give the customary salute to English men-of-war, according to treaty. (Thurloe, II. 503.) So peremptory a determination on the part of a nation but just escaped from the evils of a very

ruinous and unequal war, is a sufficient proof of the light in which the point at issue was viewed. It deserves the more attention, when we consider that this had been one of the points urged in negotiating the treaty of peace; and proves that the Dutch were as much resolved to resist any silent encroachment upon their rights, while in a state of alliance with their powerful neighbours, as they had been to prevent an open attack upon them at the formation of the treaty. Since that time, the subject has never been broached,—England having completely acquiesced, even while most zealous for her maritime rights in the narrow seas, and most successful in maintaining them.

It appears most evidently, then, that all the general principles upon which the mutual rights of nations are founded, are repugnant to the pretension of searching ships of war; and that all authors, even those who maintain the right of search most largely, confine their positions to the case of merchant ships; that all the various treaties which stipulate the visitation of ships, allude to merchant ships exclusively; that though, from the entire novelty of the pretension, no express opinion of jurists, or stipulation of treaties, can be found upon the point, yet, a variety of principles leading directly to the denial of the claim, are laid down by all jurists without exception, and uniformly recognised in the intercourse of civilized states; that no one principle can be found, upon which to ground the claim, and, more particularly, that the old pretensions of Great Britain, regarding the narrow seas, are quite foreign to the question; and that, in the only instance in which England ever attempted to advance the claim, she confined it to the narrow seas—tried to obtain the acknowledgment solely by positive stipulation—failed completely, although placed in circumstances peculiarly favourable to the attempt—and has never since, during a century and a half, renewed it. So that it would be difficult to conceive a pretension, against which the whole law of nations, as well as their practice, is more clearly and strongly opposed.

Now, the practice of searching ships of war for de-

serters, is one from which scarcely the smallest benefit could be derived, if exercised with the most unsparing vigilance. If the two or three ships of war in the American service were wholly manned with British deserters, we might lose a few hundred seamen. But even this is not a necessary loss; for an application to the Government of the United States would certainly procure a regulation among their officers for enforcing the surrender of the greater part of the deserters; and the difference between the number of men lost in spite of such regulations, and the number lost in spite of our own actual search, would amount to a mere trifle—certainly not to any thing like fifty men in a year. It must therefore be regarded as exceedingly fortunate for this country, that the claim of searching is found to be utterly untenable. Had it been sanctioned by the law of nations, there would have been some reason for maintaining it, even at a considerable risk. It would have been a national right, of an invidious nature towards a friendly power—of no sort of intrinsic value—the abandonment of which might look like giving up a point of honour—the exercise of which was worth nothing, and the assertion of which might lead to war. It should be matter of congratulation, that so useless a pretension is found to be an unjust one. To waive it, can no longer be injurious to our dignity; to stickle for it, can alone hurt our honour; and one barren, unprofitable ground of dissension is thus removed from between two nations, mutually interested in remaining always friends.

We now come to the right claimed, of searching private vessels for deserters. Some of the principles which were incidentally explained in discussing the first point, seem sufficient for the decision of this also. It was proved that a merchant ship is, in every respect, differently situated from a ship of war; and that no reason can be offered, why it should not be subject to visitation, if suspected of carrying contraband. If a government pretends to be responsible for the conduct of each individual trader within its territory, we know that it is engaging to fulfill an impossible condition; and

we are entitled to conclude, that it means to mock, or deceive us. The method of searching seems the only way of preventing or detecting the unfair dealings of neutral merchants. When confined to national ships,* it unites a degree of security to the rights of the belligerent, with an attention to the convenience of the neutral, which no other contrivance could possibly secure. Now, there seems to be no good reason for excepting the case of deserters from this right. If the crew belonging to an English man of war escape on board of American merchantmen, it is difficult to discover why they should not be pursued there, and brought back by their lawful commanders. It is preposterous to call each merchant ship a portion of the territory of the state, because the jurisdiction of the state extends to the persons on board of it. The same jurisdiction extends to the subjects of the state, though, by any accident, they should be swimming at a distance from the vessel. An Englishman who should commit murder in this situation on the high seas, would be tried at the Admiralty sessions; and yet he was on no part of the English territory. An English vessel, too, in a foreign port, is held to be foreign territory. If, then, deserters are pursued into a merchant ship on the high seas, they are only pursued on common ground; and no violation of territory takes place, any more than if they were picked up swimming at sea in their attempt to escape.

We have already shown, that all the reasons, derived from mutual convenience, are in favour of giving the belligerents the remedy of search for contraband in neutral merchant vessels. The same reasons apply almost as clearly to a search for deserters. There is only one circumstance, indeed, which can be supposed to distinguish the two cases. It is not so easy to determine which of the crew visited are deserters, and to seize them alone, as it is to determine that there are contraband goods, or hostile property on board, and to bring the vessel in for condemnation. The danger is certainly somewhat greater of our cruisers seizing Ameri-

* This was done in the Russian treaty 1801; and Lord Grenville expressed his approbation in his celebrated speech upon that occasion.

can seamen instead of British, than of their stopping vessels laden with neutral or innocent cargoes, instead of vessels pursuing an illegal voyage. But though this may render the adjustment of the mode in which our right of search shall be exercised a little more nice, it does not amount to such a difficulty as will invalidate our title to use that remedy. Suppose the right of searching were strictly confined to national ships; that no seamen were liable to be impressed who could prove, by unsuspecting documents, his having been out of England a certain number of years in proportion to his age; that the master of the American vessel, upon affidavit, supported by two sureties residing in England, that an American born subject had been taken from his crew, should have a right to obtain his surrender, for the purpose of bringing an action against the English captain in a *court of common law*, where he might obtain exemplary damages: Suppose, farther, that every American merchant vessel were declared seizable, of which above a certain proportion of the crew should be British subjects who had left their country within a certain period of their lives, and that the cruisers visiting had the option, in all cases, either of seizing the men, or of suing the master and two English sureties, in an English *court of common law*, for penalty upon a bond entered into once every year, and always kept among the ship's papers, obliging him not to sail with any British seamen as above described;—it appears that sufficient checks would be imposed both upon the English cruisers and the American traders. The owners of the ships would find sureties among their mercantile correspondents in England, and would be forced to use some circumspection in hiring their crews. They would probably be satisfied with the power of applying for redress to an English court of common law, greatly as they are inclined to distrust our prize tribunals; and indeed, were the present fears of the abuse of the right of search realized, a single verdict obtained against a captain in the navy for impressing an American, would have the full effect of checking the evil. Some such method as we have sketched, of loading both parties with a considerable

risk in the conduct of the business—of making each act at his peril—might be arranged without much difficulty, and check the desertion of our seamen, while it secured the American traders from vexatious detention.

We have now been stating the right of search, and the mode of searching it, as high as possible; that is to say, the right, as fully as we conceive it to exist, and such a mode of enforcing it as would be requisite, if the importance of the object to be gained were very considerable. We cannot help thinking, however, that this is in general a good deal overrated by those who discuss the question. The demand which our extensive commerce affords for seamen, must always produce a supply in some degree proportioned to it; and the blanks occasioned in their numbers by manning the navy during war, in so far as they cannot be filled up by the hands which that war throws out of employment, will operate as an increase in the total demand. To this augmented demand the supply of seamen will constantly tend to accommodate itself. The temptations held out by the American trade, if our seamen are allowed to engage in it, must operate as a still farther increase of the demand, and a bounty upon the supply of seamen. Instead of breeding seamen, as it were, for our own commerce only, we should breed them for the whole commerce of England and America. We should, therefore, be much better supplied with them, than if we bred them only for ourselves,—as a country is sure of having more corn for home consumption, the more it grows for exportation. This consideration deserves to be weighed against the inconveniences which we do no doubt suffer during war, from the constant desertion occasioned by the peculiar advantages of the American service, and the sudden and extraordinary drain of seamen from our mercantile navy, especially at the commencement of hostilities.* These evils, though serious,

* We need scarcely remark, that the whole of this reasoning applies to seamen who leave our merchant service, as well as deserters from our fleets; the right of our government is exactly the same to seize both, wherever it can find them, without violating a foreign territory

are much diminished by this view of the case; and it should be recollected, that the greater part of the emigrants or deserters who went over during war, return at the peace; that this augments our whole numbers of seamen while peace lasts; that, consequently, an increased degree of vigilance in the impress service, at the commencement of a new war, may still farther diminish the evil. Such being the real amount of the detriment, occasioned by a total abandonment of our right of search for seamen, it may possibly be admitted that we should, in prudence, abstain from the most rigorous possible enforcement of the right. The right is ours, clearly and in the fullest extent. The American government is too sensible, not to perceive this; we trust it is too faithful to its highest duties, not to admit so incontestable a proposition. But if it should have any invincible objection against our exercising our undoubted rights, and obtaining the redress which is our due by the arrangement above pointed out, it must devise some other remedy which shall appear likely to be efficacious. In consideration of the evil not being extreme, it would surely be prudent for this country to make a fair trial of such a remedy as shall be proposed, and to adopt it in place of the rigorous search, though it might prove somewhat less effectual. But we venture to predict that the trial will entirely fail; that nothing short of the search above described will nearly answer the end proposed; that the failure of the experiment will convince the American government itself; and that, by delaying to insist on our undoubted rights, we shall obtain a peaceable and full recognition of them in the final adoption of some arrangement similar to the one already pointed out.

It is greatly to be feared, however, that, highly as the importance of the claims just now examined has been extolled in this country, they are rather the pretences, than the true reasons for desiring a rupture with America. In consequence of the long and successful war carried on by England against almost all the other maritime powers, a great portion of their commerce, and a share also of our own, has passed into the hands of

the Americans. A certain class of politicians, therefore, regard them at once as rivals in trade, and as interfering with the course of our hostilities; and are anxious, not only to deprive them of all the benefit which they derive from our constant wars, but to injure them nearly as much as the enemy. The principle of these reasoners is, that the enemy shall trade with nobody, and the neutrals only with ourselves. We have already had an opportunity of discussing the principle of the rule of the war 1756;* and we shall, at present, only advert shortly to the nature of that claim, for the purpose of adding a few remarks to those which we formerly offered.

It is contended, that England has a right to prohibit the neutrals from carrying on any trade during war, which was not open to them during peace. But why should not the same rule extend to a trade of which the neutrals, though permitted by law, did in fact not partake before the war? It is owing to our hostilities, that the Americans carry wine from Bordeaux to Amsterdam; they came into this traffic, in order to shelter the French and Dutch traders from our cruisers; we have as good a right to prohibit it, as to stop their trade in sugar and coffee. In like manner, the French used to import American produce in their own vessels; now they only receive it in American ships: instead of a part, therefore, the Americans have the whole of this trade, and England has a right to confine them to their former share of it; but as this is utterly impossible, without stopping it altogether, she may exercise her belligerent rights in the only way practicable, and cut off the Americans from all intercourse whatever with her enemies. This is exactly what the French government has threatened us with; and it must be admitted to follow clearly, from the principles of the rule of the war 1756. Accordingly, some politicians recommend it to England. Now, let us see what follows. We are desired to cut off all intercourse between America and our enemies;—this will no doubt injure our enemies, but it will hurt America still more. For we are unfortunately at war

with about ten different nations, each of whom will thus lose its American trade: but America will lose its trade with each of them; and will suffer, perhaps, ten times as much as any of them.* Being at war with almost the whole world ourselves, we shall, in revenge, monopolize the whole trade of a neutral and friendly power, and indemnify ourselves at its expense. But shall we, in fact, be benefiting ourselves by so singular a conduct? We may call it monopolizing the trade of America, but, in truth, it is equally giving her the monopoly of our own trade,—it is confining the Americans to intercourse with ourselves, and ourselves to intercourse with them; for, the keenest advocates of the rule 1756 admit, explicitly, that we have not a shadow of right to partake, under any pretexts, in a trade which we shut against the neutrals.† If, then, we cannot cut off our enemy's commerce, without injuring the Americans a great deal more, so neither can we injure the Americans, without hurting ourselves equally; and such, in a few words, is the benefit to be derived, from the complete assertion of our pretended rights towards neutrals.

The progress of the demands which have been made by the asserters of these rights, is exceedingly instructive as to their real views. The transport of produce from the enemy's colonies to the mother country direct, in neutral vessels, is first required to be stopped. The neutral trader then carries it to his own ports, and from thence to the enemy's. We are required to consider this as one voyage, and an evasion of the first prohibi-

* The learned and ingenious author of "*War in Disguise*," (p. 37. 5th Edit.) treats with some contempt the assertion, that neutrals suffer hardship in not being allowed to supply themselves with colonial produce in the enemy's islands during war; a hardship, he observes, which they suffer equally during peace. But, surely, if one belligerent interdicts all colony trade except her own, the neutrals, instead of having the market for produce open in all the mother countries, are confined to the market of that one belligerent. If America is prevented from buying French produce, and our market cannot supply her, she suffers as much as France does by the prohibition. And even if she can get a supply from us, she suffers a much greater restriction in her trade than if she were still an English colony.

† See "*War in Disguise*," and the "Introduction to Mr. Randolph's Speech."

tion. A second prohibition is therefore demanded:—the produce must be fairly landed and pay duties; and it must not be re-exported in the same vessel which brought it. Under all these restrictions, however, the neutral can afford to continue the trade; and the produce still finds its way to the enemy, though at very advanced prices. We are now desired, therefore, to enforce the rule of the war 1756, and to prevent the produce from entering our enemy's ports at all in neutral bottoms, because, in time of peace, that commerce was interdicted by him. Suppose we again comply, and that the neutrals yield—they will carry the produce to some neutral European port, from which it may find its way to the market; that is, to our enemies. A new demand is therefore necessary. We are required absolutely to prohibit all traffic in colonial produce which came originally from an enemy's colony. Even this would be evaded; for, how is such produce to be distinguished from the very produce sold by ourselves to those neutrals, according to the strict letter of our own navigation law? We must, therefore, interdict absolutely all carriage of colonial produce in any vessels not being British. But this, though sufficient to outrage all public law, would still be inadequate to prevent smuggling, so long as any traffic remained between our enemies and the neutrals. There is but one other step to take, therefore. We must go to war with the neutrals, and put their ships upon the same footing with those of our enemy, whose places in trade they are now filling. By this chain it is that we are driven on from prohibition to prohibition, till we find that the prohibition of neutrality itself is our only remedy; and that we can only trust to the vigilance of our cruisers for the security of our colonial monopoly, and the interruption of our enemy's trade. The case is therefore short and plain. If all nations will not go to war with France when we choose to do so, we must go to war with them also. There is no other way of vexing our enemy, and protecting our mercantile profits.

Now, putting the morality of this doctrine entirely out

of the question,—endeavouring to forget the old maxims of public law, in the eye of which *neutrality* is held to be a favourable object,—allowing that the present war is of a peculiar nature, and of a paramount importance (as indeed all wars are)—and that the rules which apply to other wars do not apply to so great a contest (though this has been regularly said of every one war from the time that men began to fight, and fully as often said of the most trifling as of the greatest disputes between nations,)—let us simply ask ourselves, whether the destruction of all neutrality is likely to be so very great a gain to the most commercial and manufacturing nation in the world? With whom should we trade, if we went to war with America? Our foreign trade would be confined to Sicily and Sweden, and perhaps it might extend to Zealand. But a great contraband would enable us, through these channels, and by other more direct means, still to supply the enemy and the countries subject to him; that is to say, we should be compelled, by the approach of utter ruin, to relax our own hostilities, and to trade ourselves with the enemy. But in what way? If we send ships to his ports he will seize them;—then we must allow his ships to come to our ports, or to the ports of our allies and dependents. Is not this encouraging, not merely a foreign trade, but an enemy's trade and shipping? Is it not assisting France, for fear that America should help her? Is it not transferring the neutral privileges from our friends to our enemies? But can any body doubt, that the conversion of our whole foreign trade into contraband would greatly diminish the amount of it? Our enemies would indeed pay a little dearer, and consume a great deal less, of both their own colonial produce and our goods; but the loss would be reciprocal; and while the whole amount of it would be divided among all our enemies, we should ourselves lose upon our intercourse with each of them. The neutrals would no longer carry for us to France, Spain, and Holland, for example; nor to Germany and Russia. All those countries would therefore lose, arrange it how we please, part of their trade with us, and

suffer each so much by the loss ; while we should lose about as much with each of them, and many times more than France could lose.

It might be expected, that such obvious considerations would render all attempts against America fruitless in this country ; and incline us rather to waive some rights which we possess, than insist upon claims founded in manifest injustice. But there are certain bodies of traders, who conceive that their interests are opposite to those of the country, and seem desirous of pursuing some imaginary advantages at all risks. The depreciation of West India produce, to whatever cause it may be owing, has brought a large and highly respectable class of men, into a situation of unexampled difficulty. The interruption of all trade with the enemy's colonies, they consider as the sure means of raising the price of their own goods. Reduced nearly to a state of despair, they conceive that no change can be for the worse, and, in their eagerness to make some effort to save themselves, overlook the risk which they incur of hastening their destruction. We shall, in a subsequent article, produce very satisfactory proof, that the deplorable state of the West Indies, is owing to an excessive cultivation of sugar all over the colonies. While the whole or the greater part of this reaches the market of Europe, there will be a glut, and the price will continue extremely low. No measures which our maritime superiority enables us to pursue, can prevent a considerable portion of this produce from finding its way over. Another portion will be captured by our cruisers in its attempts to reach the forbidden markets, and will, of course, come into our own market. In the mean time, the enemy will be enforcing *his* prohibitions with a rigour not likely to be diminished by our blockade of his islands ; he will certainly obstruct the importation of our produce into the continental market, and assist the present tendency of the people in many parts of Europe to lessen their consumption of such articles. But, while the prices are thus prevented from rising so high as the West India body expects, the cost of raising the

produce will be greatly increased. A war with America must not only raise the price of lumber and provisions, but increase incalculably the charges of freight and insurance. Let us only reflect that during the last American war (long may it be called the last!) West India *premiums* rose from five to twenty-three guineas *per cent.*; that the underwriters were, notwithstanding, ruined; that in the first two years of the contest the Americans captured 733 of our ships;—and we shall be convinced, that the inconsiderable rise in the price of sugar, which is all the planters can expect, will be much more than counterbalanced by the increased expense of making and transporting it. But we are told, that such a blockade of the enemy's colonies must be enforced, as shall compel their planters to abandon the cultivation of the staple articles. This is utterly impossible, unless we pursue a mode of warfare too horrible to be described. For if our blockade succeeds so as to starve the islands, they will surrender—and by what law of war can we refuse to receive them? No one ever pretended that war gives a belligerent the right to do more than take possession of a subdued enemy; and, surely, the planters do not mean to insist that we should force all the foreign colonies into a state of universal anarchy, like that of St. Domingo, in order to raise the price of the sugars in Jamaica and Barbadoes.

A variety of more general reasonings might be offered to show that the planters cannot expect to benefit by any system tending to increase the difficulties under which the rest of the community at present labour. A diminution of the national income is likely to affect, in the first instance, those who raise articles of mere superfluity: Bankruptcies and other great misfortunes in the commercial world, must injure those most of all who chiefly trade upon borrowed capital: The same class of men is sure to feel most seriously the draining of the money market, which always attends an augmented scale of public expenditure.—But, without entering into these considerations, we believe enough

has been said to show, that the immediate interests of the West India body are likely to suffer as much as those of the country at large, by the adoption of the rash counsels which they have lately been pressing upon the government.

The inference which is suggested by the dry and tedious discussion now brought to a close, is, that there are no points at present in dispute between England and America, so important in themselves as to justify a war. The claim of searching ships of war must, both in justice and in prudence, be abandoned ;—it is at once unfounded and unprofitable. The right of searching merchant ships is clearly ours ; it is of some value, and should be insisted upon in the manner formerly pointed out. It is neither our right nor our interest to destroy the American carrying trade ; and, in our endeavours to limit the benefit which our enemies derive from it, we should be satisfied with such regulations as may increase the obstacles already thrown in the way of fraudulent transactions, and perhaps augment the expenses of the circuitous voyage.

The doctrines we have now delivered, will not, we are much afraid, be very popular at this moment among the greater part of our readers ; but, if they are substantially right, we have no doubt of their being ultimately adopted. The cry for the vigorous assertion of our naval rights, is partly founded in mere popular clamour, and partly in very rash and erroneous views of policy. Hostility with America can only be justified upon the principle of hostility with all neutrals ; and this we have attempted to show, leads, evidently, not to the increase of our trade, but to the suppression of all legal trade whatsoever, and the creation of a vast contraband, by which the enemy would profit at least as much as the power that produced it. We love our country and are proud of its glory, and jealous of its privileges and customs. We feel intimately persuaded, that, while England remains unconquered, she is happy beyond all other nations, be her rulers as weak or as wicked as they may. But it is precisely because these

are our feelings, that we wish to see no rights asserted, and no new wrongs laid to our charge; and that we look with regret and aversion to the probable alienation of the only independent state with which we are still in amity.

REVOLUTION IN FRANCE.*

[From the Edinburgh Review.]

SINCE the breaking out of the French Revolution, excepting, perhaps, the failure of Napoleon in Russia and the downfall of his enormous power, no event has occurred on the continent of Europe that will stand in any kind of comparison with the late proceedings in Paris. The influence which they are calculated to exert, both upon the condition of the great people over whose name they have shed the lustre of an imperishable renown, and the more wide-spreading consequences that must speedily flow from them in every other country, forcibly arrest our attention at the present moment, and demand a calm discussion. If all mankind are interested in this glorious achievement, Englishmen have of all others the deepest concern in its effects, not merely as well-wishers to the liberties of other nations, but as feeling watchful of every encroachment upon their own; for with the fullest disposition charitably to construe the feelings and principles of our own rulers, we take it to be abundantly manifest, that the battle of English liberty has really been fought and won at Paris. Under the influence of these impressions, we advance to the contemplation of this mighty theme; and we deem it a sacred duty to

* *Reflexions sur la France ; vices de son Gouvernement ; causes du Mécontentement des Français sous le Ministère de Polignac, &c.*

view it, deliberately and candidly indeed, but with entire freedom, and without even the least respect of persons, or the most remote care to whom our remarks may prove offensive. Our purpose is certainly to speak the truth, and not to give offence; but if the truth prove unpalatable to any, be theirs the blame, not ours.

As soon as the Prince Polignac was called to the head of the French King's councils, the disposition to favour the Jesuits, to undo the effects of the Revolution, and to counteract the current of liberal opinions, long enough apparent in the conduct of Charles X., and his bigoted daughter-in-law, broke forth without any restraint, and kept no terms with any antagonist. The dauphin, if indeed he really differed from his family in point of sense, and thus perceived the precipice towards which they were hurrying, was silenced, and borne along by the imperious passions of his fanatical consort. Among the old nobility who surrounded the throne, none had the wisdom to discern or the virtue to point out the perils which beset it. The priests ruled supreme over the monarch, or divided their dominion with the dauphiness. Nor had they the sense to see, in their thirst for revenge, that the impetuosity of the pursuit might frustrate the attainment of their object. One or two military men, of Napoleon's school, were in some credit with the court; but their habitual disregard of the people, and confidence in the steadiness of the army, made them the worst of all advisers, while they gave encouragement to those who looked for their services, as tools at once unprincipled and submissive.

The description of the colleagues to whom the Prince was associated, farther betrayed alike the dispositions and the blindness of the court. Labourdonnaye was a man of honour and principle; but, from the sustained violence of his political opinions, all avowedly in favour of arbitrary power, and against every vestige of the revolutionary improvements, his name was regarded as the synonyme of the ancient *régime*, in church and in state—old parliaments—old feudal privileges—an insolent nobility—and a bloated priesthood. His extreme violence in debate had marked him out still more for

general dislike; and he was the object of unceasing animosity to one party, without securing the good will of the other, whose distrust was excited by his intolerant presumption, and unheeding temerity. A few unknown and insignificant men, such as Ranville, were the make-weights of the junto; but one there was besides Labourdonnaye, for whom it would have been well could he have been unknown. General Bourmont was hated, if not despised, by the army; but his treachery to it was sufficient to win the confidence of the Bourbons; and, whether from the disposition, too common with kings, to trust those who are thrown as it were into their arms, by being left at their mercy, in the universal distrust and hatred of the rest of mankind, or because such an arrangement would insult and degrade the French army, this person was selected from among its gallant captains, and placed at the head of the war department. He had, moreover, served with the Dauphin in the shameful war against the liberties of Spain; and having enabled one branch of the Bourbons to trample upon freedom abroad, he might be employed in helping another to crush it at home.

The announcement of such names completed the impression which the elevation of Polignac was calculated to excite, and it spread consternation through all France. Reflecting men saw on the throne a prince of weak understanding, but furious bigotry, the declared enemy of all liberty, civil and religious, and blindly bent, under the dictation of his confessor, upon working out his own salvation, by rooting up every vestige of the blessings which his people had gained, at the price of so much suffering for a quarter of a century. Around him they perceived a young brood of the self-same character, who shut out all hope of better times, because the fanaticism of the old king's successors was quite as furious as his own. The chief minister was a weak and reckless bigot; a man of no pretensions to capacity, or knowledge, or experience; whose dulness and frivolity made his mind impervious to reason; whose fanaticism made it proof against fear. His colleagues were one or two obscure and desperate adventurers, the Cory-

phæus of the ultra royalists, and the deserter of his post on the eve of the battle which had inflicted on the French the unmitigated evils of the restoration. Among the tools with which this portentous cabinet had to work, were some of the most unprincipled of Napoleon's generals, men grown gray in the career of cruelty, profligacy, and oppression; practising in the court of the Bourbons, all the suppleness which they had learned in their riper age under the despotism of the usurper; and ready to rehearse once more in the streets of the capital, the early lessons of butchery which had been familiar to their more tender years, under the convention and the directory. So prodigious a combination of evil designs, blind violence, and unprincipled instruments, had seldom been arrayed against the happiness of any people. The firmest beholder could not contemplate it without alarm, nor could the most sanguine descry any ground of hope, save in the chance of fatal errors being committed by such adversaries. These errors we will not say rescued, but enabled the people to rescue, their country.

For a while there were no grounds of discontent or of opposition afforded by the proceedings of the new ministry; and, accordingly, the slavish doctrine, so full of mischief, and so calculated to gain the favour of feeble, thoughtless, and spiritless natures, was every day echoed in our ears, "Measures, not men." We were told not to condemn the ministry without a trial; we were bid to wait until they should do some act deserving of reprobation; we were asked what harm they had done, or attempted, that justified such a universal clamour as was raised against them? "Only be quiet for a little while," it was said significantly, "and you may find their measures exactly such as you would yourself approve?" But the more reflecting and sagacious did not choose to wait until it should be too late to resist with effect—too late for any thing, except to be laughed at by the deceiver. They knew full well, that if you suffer men unworthy of confidence to rule, they can always choose their own time for undermining your defences; that they may, by slow degrees, by car-

rying little encroachments at a time, gain a power no longer to be resisted; that, if opposition is delayed until their time comes—until they shall do some act deserving of reprobation—they may be enabled to do the act, and may leave you, its victims, nothing for your consolation except to reprobate. The French had the sense to prefer effectual prevention while it was yet time, to unavailing blame when the time was past; they rejected the kind, and judicious, and, as it was termed, temperate council of their worst enemies on both sides of the channel; and they raised all over the country one loud cry for the removal of a ministry at once odious and contemptible. The firmness of the court was not shaken by this universal expression of public opinion; the vain feeble creature who had become prime minister, held his ground; the chambers were dissolved, that a new election might improve their subserviency; and the friends of despotic power, in both France and England, fondly and foolishly hoped that the day was their own. Every engine of influence was set in motion; praise to whom praise was due, honours to whom honours, threats to whom threats, and bribes to whom bribes. The existence, at least the peaceful existence, of the dynasty was staked upon the issue of the contest; and no pains were spared, and no scruples were allowed to intervene, and no means were either neglected, or despised, or rejected, which might farther the return of a more complying legislature. The constant cry of “Measures, not men,” was repeated—that cry which so often bewilders honest, weak men in England, and leads to such remediless mischief, and stands in the way of so much solid improvement, enabling the enemies of all amendment in every branch of our system, to maintain their ground, and resist every good measure:—that cry which, beyond every other, is in its operation self-contradictory, and in its effects self-destructive, inasmuch as, under the vain and flimsy pretext of making measures every thing, the means are afforded of frustrating all measures, and making all good intentions nothing. This cry, so plausible, so perilous among the ignorant, so well adapted to mislead the unwary and

inexperienced, was echoed wherever two or three were gathered together to vote for the deputies, or electors, or presidents. It was every where attempted ;—thanks to the good sense and the firmness of the people, it every where signally failed ;—and they wisely chose the *men* who were most sure to promote the *measures* which the public safety demanded, by wresting the power of putting that safety in jeopardy from the *men* who were bent upon the worst of *measures*, and those *measures* would inevitably carry, if power were left in their hands. This hypocritical, this canting pretext, sustained a defeat every where, from which it has not yet recovered ; and a representative body was elected, resolutely bent upon doing its duty in the only manly, rational, and effectual manner by which France could be rescued, and her liberties saved.

The new chambers met, with the eyes of [the whole civilized world anxiously bent towards them. The first step showed how much the government had gained by the dissolution. In England, had the most weak and despised ministry that ever ruled the state dissolved the parliament, and a new House of Commons been returned, the most adverse to their countenance in office, we much fear that a thousand follies—squeamishness in some—alarm in others—politeness towards individuals in one—indolence and idleness in another—the wish not to offend the court or the ministers before it was necessary—the love, or the pretence, or the cant of candour—the desire of being, or appearing, moderate—the influences of wives and daughters loving courts and parties—the slowness to commit themselves unnecessarily—fox-hunting, if the weather was mild—New-market the alternate weeks—customary residence till Christmas in the country—a condescending visit and shooting, performed by some duke—a gracious one accorded by some prince—letters, half-chiding, half-tender, from some lady of influence and activity—would, altogether, have made the attempt quite hopeless to bring forward in the very beginning of the session all the force gained by the opposition during the elections. A new speaker might be proposed ; the man least popu-

lar with the house, least suited for the station. But in vain would the leaders of the opposition expect their followers to muster on so fitting an occasion, and display their strength, so as at one blow to crush the common adversary. "The question is too personal"—"It is beginning too early to oppose the government"—"Wait till some measure is brought forward"—"Why take the field before even the king's speech"—"Wait till after the holidays"—"Any measure of economical reform I will support"—"I am against Negro slavery, in a temperate way"—"I would even give Manchester members"—"This looks too, like a party measure;"—such would have been the answer of the stout and independent members of an English opposition, to the proposition not to let an incapable minister dictate to a strong and a discontented parliament. Such are the causes of misrule in England, by ministers with neither influence in or out of doors—such are the glaring, rather let us say, such have hitherto been the glaring, the inextinguishable breaches of all public duty, committed by men chosen to protect the interest of the people, and professing themselves to be the independent friends of right government. From the tools of the ministry, of course, nothing is expected, and no blame is imputed to them. On the contrary, they are steady to their purpose, and ever at their post. Their employer finds them worthy of their hire; the government has no right to complain of them. It is the people that have a right to complain; it is the pretended friends of the people that are wanting to their employers; it is the loud pretender to patriotism and independence that slumbers at his post, or is never found near it, and wilfully suffers the men to domineer, whom he was sent to oppose, and the measures to languish and to fail, which, on the hustings, he vowed to support. Hence it is, that the weakest of cabinets has ceased to dread even the most powerful opposition; and that the least popular of monarchs has found it an easy matter to choose his ministers, almost with as little regard to the public voice, as if he were choosing his household servants.

Not such was the manly, and ever to be respected,

demeanour of the French opposition. No silly, effeminate fear of being thought hasty, or rash, or factious—no preference of personal to public considerations—no listening to the voice either of sloth, or flattery, or cant—could turn these sagacious and firm-minded men from their honest and avowed purpose. They were as mild in their converse as our weak patriots—as civil, as refined in the drawing-rooms—as well disposed to set a just value upon the intercourse of social life, as the most subservient of our emasculated or superannuated frequenters of “fashionable circles” can be for the little lives of them. But in the chambers they knew they had a duty to perform, and a country to watch them; and they threw off the fribble when they entered those halls, whither they had been sent under a pledge to rid the nation of a government which oppressed and disgraced it. The chambers met—the presidents were proposed—the opposition mustered on the first vote—the ministry were signally and shamefully beaten—and all men saw that either the fate of the ministry, or of the dynasty which supported it, was irrecoverably sealed. We ourselves predicted this result of the dissolution. “The elections,” we said in our last number, (p. 565,) “are closed; the result has disappointed none but the purblind minions of power; and nothing seems to await the ill-advised monarch, but the choice of abandoning his throne, or retracing the steps by which he has lost the confidence of his people, hazarded the existence of his dynasty, and endangered the tranquillity of France, and the peace of Europe.”

It was now that the character of both the royal family and its ministers broke out in all its force, and in all its frailty. They were persons manifestly beyond the reach of those motives and instincts, which provide for the safety of ordinary mortals. They were inaccessible to rational apprehensions of approaching danger, because they were impenetrable to reason; they were incapable of instinctive fear, because their minds and their feelings, and almost their senses, were hardened and perverted by fanaticism. Among the rest, the Prince Polignac stood conspicuous,—towering over all

in folly and presumption; calmer than any in the midst of perils from which no genius could escape, and difficulties from which all the art of man could not extricate itself; and yet shining in the full vigour of an incapacity, wholly without example in any European minister, or potentate from the days of the Idiot Kings—presenting to the astonished gaze of the world, a union almost preternatural of serene, self-complacent confidence, in the negation of every human qualification for his place, and the absence of all chance of unravelling the toils wherein he had entangled himself.

All men were aware of the desperate situation of the government; all saw too that it was utterly incapable of grappling with even the most ordinary difficulties. But no one could have divined the remedy which was actually applied for its relief. A majority against the ministry had occasioned the dissolution: when the majority, in consequence of one general election, had been nearly doubled, who could have fancied that the remedy would be another dissolution and another general election? Who could have fathomed the depths of that moon-stricken folly, which should dream of lessening the disadvantage accruing from one appeal to the people by a second appeal, in contempt of the first—the senseless stupidity of expecting that the people would be gained over to the government, and choose obsequious representatives, in return for the insult of rejecting those first selected, and rendering void and of none effect the whole elections which the people had deliberately made? Yet such was the expedient to which the government had recourse. Nor is the din yet out of our ears of the applause bestowed upon this act of insanity, by the clamorous advocates of despotism, both in England and in France. “The firmness of purpose displayed by the Bourbons”—“That unshaken resolution, not to be moved by threats, exhibited by Prince Polignac”—“The extraordinary vigour of this distinguished minister, fitting him for the troublous times he lives in”—“The statesman-like capacity shown by the French premier, who, had Louis XVI. been fortunate enough to possess such a minister, would speedily have pu

down the revolution :”—Such was the language of the ministerial advocates in both courts, for in both they made common cause. Never did they consider the second dissolution as any thing other than as a mark of transcendent genius, and an augury most favourable to the grand struggle now making in France for legitimate rights, against the insolence of popular pretensions. It was, however, more than insinuated by those wise adherents of government on both sides of the channel, that the Bourbon ministers had other resources to support them, besides their prospect of overawing the country by their undaunted front. “They were resolute in their purpose of not yielding; and determined not to be defeated without a struggle.”

The dissolution having been proclaimed, men anxiously waited for the next step of those infatuated creatures. Nor was the interval long—so short, indeed, that to this day it is an inexplicable mystery what could be the meaning of the second dissolution—for it had not been made known above a week, when the memorable ordinances were issued, which at once brought on a crisis never to be forgotten till time shall be no more. The insensate mortals who ruled thirty millions of freemen, by one stroke of the pen abolished the constitution, changed the law of election, and destroyed the liberty of the press. The troops which filled and surrounded Paris, were charged with the execution of this decree.

Attempts have since been made by the friends of the French ministers, to shift from them to their master the frightful responsibility of this measure. In vain! For did not those ministers draw up that prolix and elaborate statement, submitted by them, and signed with their names, detailing all the arguments upon which they thought fit to ground their earnest recommendation of the measure they were calling down from the throne upon the nation? That document surely is not so swiftly forgotten, which was hailed with so much rapture by the sycophants of despotism all over Europe—and which, even in England, gladdened a few of the most noisy, but most despicable creatures that are suffered by Providence to crawl upon the face of the earth.

They have not, assuredly, forgotten that "firm and manly document"—that "highly statesman-like paper"—"that vigorous and decisive instrument, so well worthy of the great occasion which called it forth." But if they have, others have not; and its authors may not find it so easy to wriggle out of it, as its admirers now do to cast it into the shade.

The shameless and profligate measure thus entirely acceptable to the lovers of despotism, produced an immediate resistance on the part of the people. All men saw that the worst of designs menaced them, and felt that there was not a moment to lose in resisting the audacious attacks upon their liberty. They stop not to argue on the niceties of the case; they waited not the effects of discussions and publicity; they rejected, with a just and a memorable indignation, the vile proposition which some slave dared to make, of having the question between them and their oppressors tried in the courts of law. Exercising the sacred and imprescriptible rights of freemen, they instantly flew to arms, well aware that they who stop to parley with tyranny, above all with military tyranny, are already subdued and enslaved. They acted at once upon the sure principle, that the only way of meeting a tyrant is in the field and the fight. They were tried, and were not found wanting. The wretches who had framed the ordinance, backed it with armed men. The slaves of Napoleon, now of the Bourbon despot, headed the mercenaries, which Switzerland infamously hires out to shed the blood of freemen for the lucre of gain—an enormity which well deserves that those sordid states should be annihilated as an independent power. The Swiss fought against the people; but few indeed of the French soldiers could be induced to join in the fray. Now was seen that glorious sight which has filled all Europe with ceaseless admiration, and will hand down the name of Parisian to the gratitude of the latest posterity. The peaceable citizens of the capital closed their shops; left their daily vocations; barricaded the streets; tore up the pavements; armed and unarmed confronted the enemy, and poured on every side the swift destruction that awaits

troops acting in a town thickly peopled by men determined to be free. The awful lesson now taught to all soldiers—the bright example now held up to all freemen—is the more worthy of being had in perpetual remembrance, because there was no discipline, no concert, no skill of any kind displayed, or required. All men had one common object, to slay the troops that dared oppose them—to embrace those soldiers that still remembered they were citizens. Several regiments of the line at once refused to act; but few joined the people. The refusal, however, was of the last importance, for it spread among the ranks of the whole army, filling the tyrants with despair, and animating the people to new feats of valour. The courage of these gallant men surpassed all belief. Many rushed upon the loaded guns that were pointed with savage barbarity by the bloodthirsty tyrants down streets crowded to excess. The old and the young vied with men of mature years, and women bore their share in the strife. From behind the barricades, the boys of the Polytechnic School, braving the cannon, and only seeking shelter from the musketry and the bayonets, maintained a constant fire. The multitude loaded and handed them their guns; and so steady was their aim, that of one regiment, they killed five hundred men, and all the officers save three. The slaughter of the people, indeed, was great; three or four thousand fell; but as many of the mercenaries were made to bite the dust. The victory declared every where for the citizens; the soldiers retreated; the National Guard was formed as in 1789, and under the command of the same gallant and venerable chief, the patriarch of the Revolution in both the old world and the new;—and the Bourbons ceased to reign.

But where were the vile authors of this atrocity, while slaughter reigned on every side? Where were the men who had let loose the soldiery upon the multitude, to maintain their own power? Where were they, those “firm and vigorous statesmen,” whose courage had been extolled in all the haunts of despotism? Where were they, when the danger was near, and there was a possibility of their lives being made the forfeit of their

unheard-of crimes? This question no man can answer. No man knows where the person of the wretched Polignac was, while the battle raged which he had ordered to begin. This only is known, that he was nowhere seen in the battle, and that he and his colleagues all fled to a distance from the scene of action, in various directions. Some of them have since been taken; and if they are suffered to escape condign punishment, a premium is held out to treason against the liberties of the people, while all men know that unsuccessful efforts on behalf of those liberties lead to an inevitable fate.

The conduct of the French people on this occasion was truly above all human praise. Their moderation in victory even exceeded the bravery that gained it. No one act of cruelty stained the glorious laurels which they had won. Even plunder was unknown among the poorest classes of the multitude. A most affecting circumstance, which cannot be told without emotion, is related of those who opened the bankers' and goldsmiths' shops. The lowest of the mob were for hours among untold treasure, and unwitnessed; not a farthing—not a trinket was touched. The same persons were seen, after the fatigues and perils of the day, begging charity, that they might have wherewithal to purchase the meal of the evening; and when the purses of the admiring bystanders were pressed upon them, a few pence was all they would accept! No Greek, no Roman virtue ever surpassed, ever equalled this.

In casting our eye over the magnificent picture of which we have only been able to sketch a faint outline, we must again, as in reviewing the contests of the senate which preceded the battle in the field, acknowledge the superiority of our neighbours over ourselves. It can hardly be doubted that, were any marked attempts made against the liberties of this country, the English people would in some way resist, and would, sooner or later, make an effectual stand against oppression. But it is to us equally clear, that despotism would have far too good a chance of being successful in the first instance. So many would go about preaching up prudence, moderation, peaceable measures; so prodigious

an effusion of cant would be made in favour of our "immaculate tribunals," that the tendency would, we fear, be pretty general to have the question between the government and the people brought to issue in a court of law. Yet who can pretend to doubt, that almost all courts of law lean habitually towards the existing government? Who can doubt, that the judges are in their nature well-wishers to what they term a firm or strong government, and regard with a jealous eye all popular feeling and popular rights? Who is so ignorant of judicial proceedings, as not to know that a little new law is always forthcoming for any pressing occasion; sometimes raked up from old authorities or long-forgotten cases—sometimes derived from vague and common-law principles—sometimes boldly, and even impudently, made to suit the purpose of the hour? Who does not know that the learned judges have a way of just grinding a little law for present use—so that, though you may not always be able to tell beforehand by what route they will arrive at their conclusion, you have a pretty good guess of the side they will decide for,—namely, the crown or its officers against the people and their friends? Verily, we do fear greatly, that an appeal made to such guardians of the constitution in this country would have led to a decision in the oppressor's favour, and that at all events the House of Lords, in the last resort, would have determined in favour of the "Noble Duke," or the "Noble Lord in the blue riband," at the head of his majesty's government. We are far from believing that this would have ended the dispute;—new encroachments would have begotten fresh remonstrances, till in the end the resistance would have been effectual, the tyrant would have been overthrown, and the successors of Judge Jeffries would have justly shared his fate. But a very long time would have been required for all this, and much would in mean while have been endured. Nay, had the government only been content with a considerable encroachment on the rights of the people, and not pushed matters to the utmost extremity, no resistance at all would have been offered; and aided by the courts of law, the rulers would have

triumphed in security, so they were only moderate in their oppressions. , If no such thing can now so happen, let us be well assured, that it is because of the glorious example set to us, and the fatal warning held out to our rulers, by the French people. But we deem it a duty to state these matters, painful and mortifying though they be to national pride. We are not the first of nations, perhaps, in all qualities; but in that of self-praise, self-complacency, self-exaltation, we surely far excel every people that ever existed. It is but right that, where a case occurs to mortify this pride,—to set before our eyes the reality,—we should meditate upon it, in justice to the merits of other nations, and in order to learn a lesson of humility and wisdom ourselves.

It is fit that we should now pause upon the extraordinary crisis, over the history of which we have thrown a rapid glance; and we are to consider what reflections are principally suggested by it, in two respects; first, as regards France herself; and, secondly, as regards other countries, and especially our own.

I. Nothing can be more important to the interests of France, to her liberties, and to her tranquillity, than the exemplary good conduct of the people, in both the trying predicaments in which they were placed—at the beginning, namely, and at the close of the revolution. The great promptitude with which they met the aggression upon their freedom, and the marvellous temperance with which they used their victory, almost cast into the shade the brilliant courage that secured it. Both the one and the other will be productive of inestimable benefits to France. The swiftness with which punishment followed crime, will for ages to come operate as a salutary warning to all tyrants, that they can no longer hope with impunity to encroach upon the liberties of their subjects. Men who are touched by no feelings of compassion for their fellow-creatures, influenced by no principles of public virtue, are found accessible to fear; but when a prince once permits himself to plot against his subjects, he is armed with some resolution, and he can face remote dangers, of slow approach and uncer-

tain arrival, in the pursuit of a favourite object. His advisers, too, may be disposed to run some such risks, or at any rate to let their master encounter them. "Things will last my time at all events," say they; and thus mischief is hatched or counselled. But such persons have now learnt that they have no breathing time, no respite, no opportunity of escape; they must lay their account with an instant crisis; they must make up their minds to the combat, at a moment not chosen by themselves; and the combat in question is the real, actual operation of being bodily attacked, and either slaughtered, or banished, or imprisoned and speedily hanged. It follows, that responsibility in France has become real, from being nominal; and the people of that country will not be long in finding the important advantages of the change.

But the moderation of their late proceedings is almost equally beneficial in its tendency. Had any needless violence, any bloodthirsty excesses, been committed, the natural aversion to cruelty would have produced a reaction like that of the first revolution, and made it almost impossible again to excite resistance against unjust rulers. What gave the oppressions and extortions of the directory their unchecked course?—nay, what enthroned Napoleon on the ruins of the republic, and then sustained his despotic authority at the cost of so much suffering to the whole people—what but the awful recollections of the far more hideous reign of terror, and the resolution to suffer any thing rather than plunge again into such dismal scenes? The tyranny of Napoleon and his conscription gained in like manner a much longer respite for the crimes and follies of the Bourbons, than they otherwise would have had. But now the people know, that treason against the constitution may be resisted without any criminal excess; that the sacred duty of self-defence can be performed without needless violence; that the people can exact condign punishment from evil rulers with as much deliberation as the government can from rebellious subjects. The lesson upon resistance which Mr. Fox wisely inculcated, is now taught in a way too

striking to be erased from the memory of the French rulers. He said, that resistance was a right which the people should as seldom as possible remember, but which the government ought never to forget.

The stability of the new government will be mainly secured by the same moderation. It has thence happened that a revolution of great extent, and carried by much bloodshed, has left behind it no angry feelings, no boisterous triumph, on the one hand—no needless humiliation on the other. A people so demeaning themselves, are worthy of their rulers; and armed with the strength thus conferred on them, those rulers will do their duty by the people, trusting them liberally, but governing them so as to secure the tranquillity of the state.

It now becomes a most important question, how this tranquillity, and the permanence of a good constitutional arrangement, may best be provided for. We throw out a few reflections upon this point with freedom, but with sincere respect for the illustrious patriots from whom we may in some particulars be thought to dissent.

It seems to us of supreme importance, that the elective franchise should be placed upon a more extended basis. So very few persons have the right of voting at present, that an occasion might arise when intrigues, either of turbulent demagogues prone to change, or of courtiers desirous to extend the royal prerogative, would, in favourable circumstances, obtain a majority in the Chambers, against the sense of the community at large. Both the stability of the throne, and the liberties of the country, would be best secured by such a reform as we are now alluding to.

A serious danger appears to impend over the state from an opposite quarter. There is an absolute necessity for arming the executive with sufficient power to render it capable of administering firmly the great functions which belong to it;—the conservation of the peace at home, and the proper representation of the nation in its intercourse with foreign powers. On this depends the security of the two greatest blessings which

any state can enjoy, domestic tranquillity, and peace abroad. But after suffering so much from the grasping propensity of their princes, and experiencing so largely what their false nature is capable of, it is not unnatural for the French people to be over-jealous of the prerogative, and to close their eyes entirely upon the dangers of too weak a sovereign power, while intent upon counteracting the hazards of one too strong. Some crude, and exceedingly alarming opinions that have been ventilated in Paris, and partially repeated in this country, suggest to us the apprehensions under which we are now writing. The best and shortest way of pursuing the subject, will be at once to state these.

Much discussion took place previous to the act of settlement in favour of the Orleans branch, upon the important subject of the nobility. It was proposed to restrain the rights of that order, in a manner unprecedented in any state where aristocracy is at all recognised; and the abolition of hereditary rank, or confining the peerage to the lives of the persons first ennobled, was very openly proposed, and the farther consideration of the matter only postponed. It is impossible to contemplate such a change without the greatest alarm; but we even view the entertainment of the subject with apprehension; because it seems to betoken a very superficial acquaintance with the question, and a very light way of treating so weighty a concern. If nobility is to expire with each peer that is created, what an enormous influence is given to the crown, over the families of the aristocracy! All men love to transmit their honours in their own blood. What peer, then, will dare to oppose the court, especially towards his latter years, if he can only hope to leave his son noble by gaining the favour of the sovereign, or his servants? Then, how few sons of peers will dare do their duty, when it may cost them the fall from their father's estate and privileges? A more certain method, as it seems to us, could not be devised, of rendering all the peers subservient to the ministry for the time being; and also of enlisting, on the same side, whatever of weight and influence the families of the peers possess out of the upper

house. Yet, it is in vain to deny that this proposition was grounded upon an over-jealousy of the crown, and a dissatisfaction with the peers for leaning too much against the people, and in favour of the court.

We shall not detail the various ways in which it is manifest that such an arrangement would be wholly repugnant to the very nature of a nobility. It would in fact, convert all the aristocracy into so many place-holders for life, without salary; it would be abolishing nobility, and extending the number of orders of knighthood, but with this difference, that the knights would have legislative privileges. Who in England seeks among the bishops for the stout opposers of the court? Yet such a measure would make the whole upper house bishops or peers for life. We must really take leave to say, that as long as the restrictions upon the rights of primogeniture are so opposed to the accumulations of large estates in the aristocracy, there is no ground for alarm, lest that order should be too powerful: but this plan would not merely annihilate their power—which would be one evil—it would produce a far greater mischief, by annihilating their independence. The order would remain, with much direct legislative power, and some little influence of station; but all this power and influence would be habitually devoted to the service of the court.

Another subject of great alarm to us is the constitution of the National Guard. This is a most important body—for good or for evil, most powerful. It sprung into existence almost in an instant, during the early stages of the first revolution: 100,000 men took up arms in Paris alone, to perform the office relinquished by the distracted government of Louis XVI., of protecting the public peace. They have, of late, with the like celerity, been revived; and 60,000 men in arms were lately reviewed by the king and his generals. There are, certainly, not less than a million of these conservators of the peace, and checks upon the executive government, in all the extent of the country. It is because we desire to see them conserve the peace, and by the awe of their power, operate as a counterbalance to the army under the sovereign's command, that we are most anx-

ious for the purity of the establishment. The proposal of giving them the choice of their own officers, fills us with alarm. Are thousands of armed men a fit and safe deliberative body? Is it wise to make the contest for popular favour a canvass for the command of troops? Would it be well for public men, if to gain popularity, and to have an army under their control, were the same thing? Surely these are questions to which but one answer can be given by any reflecting person. Can there be any cause of alarm if the crown shall appoint the officers, while the men are all citizens? We clearly think not; and we fervently pray that this view of so important a point may be taken in France. Far better at once say, "We can trust no kingly government;" better resolve to have a republic in name and form, as well as in substance; because then it would be utterly impossible to have it on the principle of military election. The republican who honestly desires to see an end of all kingly rule, is grievously deceived if he dreams that the proposed scheme is the path to this consummation. It is the high-road, no doubt to the overthrow of any given government,—regal, or aristocratic, or oligarchical, or democratic; but it takes to a point a good deal farther on—it leads to direct military despotism.

Some things have been thrown out by way of recommending large restraints upon the royal authority. It has been proposed to limit the power of making peace and war; to restrain the number of troops by a fundamental law; to take away some of the patronage usually vested in the crown. On these and similar topics we say nothing; being quite satisfied that a little reflection, independent of the instruction afforded by our experience in this country, will convince any one how impracticable such restraints are, if the government is to be really monarchical. A free press, a reformed representation, a standing army only large enough to defend the country against foreign enemies, and its internal police in the hands of armed citizens,—these form the best and safest checks upon prerogative, the most ample security for the liberties of the people. We are all along assuming, that a limited monarchy is the kind

of government best suited to the wishes and habits of the French people, and to their love of military glory—a position which, in our humble judgment, it would be wild to question. A republic would inevitably, as before, begin in anarchy, and end as before, in the despotism of some fortunate soldier.

It is certain, that, in framing a constitution, no regard is to be had to the personal qualities of the individuals who may first be called to administer its powers. But there is one circumstance not to be left out of the account, in providing for the powers of, and restraints on, the crown—we allude to the certainty, that for some generations the king of the French will have a competitor. The ex-king of France will be a *pretender*; and more than the word is unnecessary to remind those who are acquainted with English history, how materially this circumstance tends to keep the reigning family in check, or, in the ordinary phrase, to set them upon their good behaviour.

II. The first consideration that meets us in bringing our regards homewards, and surveying the bearing of the late revolution upon our own concerns, relates to the kind of part which the English government has sustained throughout those events of which we have been sketching the history. That it labours under very grievous suspicions of having befriended the infatuated tyrant and his ministers, unfortunately admits of no doubt; and that these suspicions extend to the French nation as well as our own countrymen, is unhappily equally true. Are they, can they be, likely to rest upon any foundation? Or do they merely proceed from the known sentiments of our ministers regarding every thing free, all popular rights, all royal immunities, upon the continent? Certain it is, that, however much they may have yielded to the people at home, or rather, whatever concessions the people may have extorted from them—abroad, where they have neither parliamentary opposition, a free press, nor associations, nor public meetings, to wring from them an assent to improvements, they are found the steady and unflinching patrons of all the forms of antiquated superstition and

hateful despotism. Theirs is the preference of the Turk over the Greek,—over those whom they would rather restrain in their efforts for independence, than gain the benefit of a counterbalance to Russia, where she is likely to domineer the most perilously for our own interests; and yet they hate the Calmuck, in spite of his despotic accomplishments, because, in fighting his kindred Turcoman, he must, whether he will or no, in some measure wage the war of freedom. For them it is to back the savage tyranny by which Austria has been justly said to renew, in fair Italy, the inroads of the Goths.* The faithless and detested Ferdinand, the vile, bloodthirsty Miguel, receive from them,—from the ministers of a mild monarchy and a constitutional king, countenance and support; nay, the navy of England is prostituted by her rulers to break the known laws of nations, for the odious purpose of comforting and abetting the worser of the two most flagitious tyrants of modern times. That men, to whom despotism the most barbarous and atrocious never looked in vain for sympathy, and, as far as they dared lend it, for succour, should be deemed the natural allies of oppression in the milder form, which it put on under the Charlesses and the Polignacs, can hardly be deemed very wonderful; and accordingly, we find the belief deeply rooted in every man's mind, first of all, that the English ministry favoured the formation of the late French cabinet, and next, that they approved of its misdeeds.

To these charges very inadequate contradictions, it must be confessed, have been given. One minister, and only one, in one house, and in one only, of parliament, positively denied that the English cabinet had interfered to make Prince Polignac premier of France. We verily believe this denial. Who ever supposed that such interpositions were the acts of cabinets? Possibly, if a like denial had been given by another minister in another House of Parliament—a minister of somewhat more weight, and who could with something more of authority

* Monti's celebrated Sonnet on the Peace:—"Che ci ha dato Iddio."
"Gli Austriaci in Italia *Gottizzando* vanno."

take upon himself to say what had not been done, the country might have been better satisfied. He, however, held his peace; and yet, if even he (though he sometimes acts like a whole cabinet, and seems to forget what in truth the public can hardly ever bear in mind, that he has any colleagues at all) had only denied "the interference of the cabinet," so plain an outlet for escape would have been left, that Lord Eldon would doubtless have excepted to the answer, and men far less astute in detecting evasions must have desiderated a far more searching denial. The phrase, *interference*, is so vague, and the phrase, *interference to make a man premier*, so much more uncertain, that no one can well say what he may not have done, who solemnly denies having done this. The English ministers were friends of Prince Polignac; they wished well to his promotion. No one denies, no one affects to deny this, even after they all see the disastrous consequences it has led to. It is possible that no direct communication may have subsisted between the English minister and the prince upon the subject. It is barely possible that nothing may have passed in conference between the English ambassador and the prince. It is conceivable that nothing had ever been said by the ambassador, nor any hints thrown out to Charles X. It is a thing which a man may imagine to be true—it is not mathematically impossible—that the late King of England, who cherished in his latter years a hatred of those principles of liberty in which he was educated;—who detested the Spanish revolution in 1823 to such a pitch, as to pour forth vows for the success of the French arms, and whose minions at Paris encouraged that detestable crusade against liberty by assurances that it was favoured by their king, and would not be opposed effectually in parliament;—it is a thing which a man may bring himself to suppose, who yet could not believe that two and two made ten, that neither such a king, nor any of his personal favourites, farthered the suit of Prince Polignac to be premier of France. All this we will, for argument's sake, admit; and still it remains undenied, that both the court and the cabinet did mightily rejoice in that infatuated creature's

accession to office; regarding, and through all their accustomed organs proclaiming, that event most auspicious to "the cause of regular government," as it is most hypocritically termed; in other words, to the interests of arbitrary power, and the enemies of freedom. Even one or two of the papers once liberal, but of late permitted, or permitting themselves, for wise but inscrutable purposes, to be ranged under the ministerial banners, sedulously defended the appointment, and hailed it as one auspicious to the best interests of England.

As these men and their organs began, so they went on. The opposition in the chambers was derided by them; the resolution of all France, as well as her representatives, to reject the ministers, was stigmatized as unreasonable and factious; the necessity of the Polignac ministry to internal peace, and the security of the throne, was plainly maintained; and, when the majorities were decidedly against the government, the most sanguine hopes were held out of the results of a dissolution, by the same politicians, who had notoriously (and we now speak of the Earl of Aberdeen's department in an especial manner) conceived the most lively expectations of Old Spain reconquering her emancipated colonies, partly by the prowess of the imbecile Barradas, and chiefly by the Mexicans flocking to join his standard. The new elections having greatly increased the force of the patriotic party, and actual violence being manifestly threatened by the wretched junto in power, we will admit that for the first time, there was some pause, some hesitation, on the part of their English friends. At any rate, no minister thought it quite safe *now* to avow himself the patron of the Bourbons. They deemed it more expedient to await the event. But if any man will say, he believes the success of their measures would have given pain to our ministry, we will tell that man, that a greater dupe does not breathe the air than he! Nay, we cannot avoid feeling a perfect conviction, that the English cabinet (there may be one or two exceptions, but speaking of the body) hoped to see the *vigour* of the Polignacs rewarded by success, and a *firm* government,

upon *true monarchical principles*, established in France. Let but the conduct of their supporters, if not their organs, be examined. The detestable doctrines of a writer, who has escaped from the country he would so fain have given a dictator to, were openly adopted by the chief ministerial Journal. The necessity of silencing the French press, and changing the law of election, was there proclaimed in round terms. It is even said that Cottu's book was originally written in English and in England, and translated into French; and the Anglicisms of the style, and the apparent originality of the passages given as translations, are cited in support of this assertion. Be that as it may, the respectable Journal to which we refer, and which is known to be under the immediate patronage of men high in office, and occasionally assisted by their pens, led the way in recommending that writer's doctrines to the people of this country, and to the French, as adapted to the state of France. The periodical works of less importance, the weekly and daily papers, with a single exception, which espouse the ministerial side of the question, adopted the same line; and weekly and daily laboured in their vocation to vilify all that the French patriots did, to defend the Polignac ministry, and to exhibit the bitterness of their disappointment at the signal failure of its late measures.

In answer to all this, how ridiculous is it to cite the recognition by the English Government of the Duke of Orleans as King of the French? Had they any choice? Could they have refused to acknowledge the king whom all France had with one voice set upon the throne? Were they prepared to summon the new parliament, and such a parliament as had just been returned, and to meet it with an announcement of a new war of five-and-twenty years for the restoration of the Bourbons? The idea is ridiculous; but we verily believe that the recognition of Louis Philip I., was hastened by the loud expression of public opinion at the elections, and by the gratifying fact that no persons held more decided language against the dethroned tyrant and his ministers, than the stanch Tory supporters of the government, and

of all governments. In the face of such appalling warnings, to have refused the recognition was at once to have signed their own expulsion from office. The recognition, therefore, proves absolutely nothing. The English ministers may have made Polignac minister by direct interference—they may have prescribed his whole conduct—they may have dictated through their ambassador every ordinance he issued—they may have sent over the draft from Downing street of every state paper he signed—and yet when the whole plot failed—when their tools were driven with ignominy out of France, or detected in the plot, and shut up in the dungeons of Vincennes,—they were compelled to submit, exactly as Charles X. was. It would be precisely the same argument as is urged for our ministers, if that sovereign were to deny that he had any concern in the events which brought about the revolution, because he at once yielded to it, abdicated the throne he had polluted, and quitted the country he had vainly attempted to enslave.

The mention of that personage brings to mind another passage in the conduct of our ministers, and one not immaterial to the present inquiry. When a criminal is detected in plotting some foul enterprise, or, having attempted to carry it into execution, fails, and flies from the scene of his iniquity, does the government of this country make it a practice to receive him with open arms,—to direct that the revenue laws shall be suspended in his favour, and to give him shelter and comfort, with much deference and respect, on our shores? No such thing—and why? Because our government never avows a patronage of rapine or murder, and regards with just abhorrence the perpetrators of such crimes. Then why, we ask, has Charles and his family been received, not only with courtesy, but with a degree of favour, which no man living believes would have been shown to the most illustrious patriot that ever bled for freedom—the most venerable philosopher that ever enlarged the powers of man, or bettered the lot of humanity? Had Washington sought our shores, after resigning the sceptre which he might have held for life,

possibly transmitted to his kindred, but that he loved his country better than all power—would *his* baggage have been suffered to pass without search at any custom-house quay in all England? No man dreams of such a thing. Suppose Polignac had succeeded, if any of the unoffending Parisians whom the tyrant ordered his artillery to mow down by thousands, had escaped from the slaughter he was destined to, who believes that the wreck of his fortunes would have been allowed to pass duty-free, and unexamined? Indeed, had the Alien Bill still armed our ministers with the power, such a refugee would have been sent back to certain execution by the next tide. Then why was the oppressor so differently treated! This is the question which we ask now; the question which the people of England are asking, and which it is the bounden duty of their representatives to ask. Charles X., by the very act of our government recognizing Louis Philip, is admitted by that government to be no longer a king—is ranked by that government among private persons. What right, then, had that government to treat him as a king? What possible motive could they have for thus flying in the English people's face, and insulting the French people also, except to show ostentatiously their sorrow for his failure, and their fellow-feeling for his fate—a fate brought on by his crimes—a failure in the attempt to perpetrate the most atrocious wickedness of which a monarch can be guilty? But it was not a mere attempt. The abdicated king came among us stained with the blood of his unoffending subjects. He had ordered his soldiers to the charge; the onslaught had been tremendous; the artillery had been, with a cold-blooded cruelty, unknown to the most atrocious tyrants, brought to bear upon crowded streets, and to sweep down thousands of all ages, and of either sex. From the miserable slaughter which he had commanded, the wretched despot had withdrawn his own person to a place of safety; and, providentially discomfited, he had fled from the scene of his crimes. This is he for whom the sympathies of our ministers are speedily unlocked; for whose accommodation the laws are suspended; who is received with

distinctions which would have been denied to the greatest benefactor of his kind who had never been a king, and a tyrant! What right, then, have those ministers to complain, if they are suspected of a leaning towards his designs? Do they not become accessaries after the fact, by this their conduct? If any man is seen submitting to a criminal's fellowship, whom all others detest, the conclusion is immediate, that he was a partner in his guilt, and that he has put himself in the offender's power. Are we to infer that our ministers dare not turn their backs upon their French allies for fear of disclosures? Certain it is, that a strange alacrity to get into suspicion by their conduct, has been succeeded by as strange a reluctance to disavow the charge by words. The more respectable of the treasury journals announced that the Duke of Wellington would deny the odious charge at the late Manchester meeting. His grace made no sign. He listened to some of his adherents expressing their alarms at the progress of public opinion, and their sagacious apprehensions that the people were becoming so well educated, "as to overwhelm the higher orders." Without stopping longer than to observe, that if by *overwhelm* he meant *outshine*, a scanty portion indeed of knowledge might cause such wise-aces to be overwhelmed by any class of the community, at least on the supposition that a man's sense is in proportion to his information.* No other remark of a political cast was made. Yet, was it beneath the Duke of Wellington's dignity to defend himself by a single sentence of disclaimer? At least, let the ministers keep some appearance of consistency. Sir Robert Peel, in parliament, distinctly announces, at a time when he feels how extremely insecure the hold over that assembly is, that the ministry will throw themselves upon the country, looking only to the people for support. Well, then; their chief goes to a meeting of the better classes of the people, assembled to do him a civility; and he thinks it beneath him to open his mouth in refutation of

* The newspapers are supposed to have greatly misrepresented one noble person's words on this occasion.

the worst charge which could be brought against a public man. He prefers labouring under it for a season, to denying it at the earliest opportunity. Is this the conduct of men who appeal to the people, and throw themselves on the country?

If, however, such be the predicament of the present ministers in respect of French affairs, such is not that of the people. With an unanimity wholly unexampled, they have suffered their delight at the late glorious revolution to burst forth, and to reach all the ends of the earth, in accents of applause, of exultation, of heartfelt thankfulness to the French people. The reason why gratitude is felt as well as admiration, may easily be discovered. The cause of the French is that of all freemen. If Polignac had succeeded, there would not have been wanting imitators of his conduct elsewhere. We should ourselves have had our Polignacs. No man of common sense can doubt this. But such a consummation is now, God be thanked, rendered utterly impossible. Several lessons have been taught in the *university of Paris*, which will not soon be forgotten. The soldiers of other countries have taken a degree there; it will be an honour to them, for it will make them remember they are citizens; it will be an advantage to them, for it will keep them from being exemplarily punished, and without any delay, by their fellow-citizens. The lesson which all armies have learned is, first, that their duty is not to butcher their fellow-subjects, at a tyrant's commands, in order to save a priest's favour, or a minister's place; next, that if in breach of their duty they lend themselves to such treasonable plots of courtiers, they are rushing upon their own certain destruction. For a lesson has also been taught to the citizens of all great towns, that the soldiery cannot succeed in enslaving them by force of arms. A well-inhabited street is a fortress which no troops can take, if the inhabitants be true to themselves; provided there be other streets near requiring a like attack from the military. Far be it from us to suspect the gallant soldiery of other countries of showing less patriotism, less humanity, than those of France lately displayed; but

the example is encouraging to the virtuous portion of the army; the lesson, the warning, is wholesome to the profligate and unprincipled, who alone make a standing army dangerous.

Furthermore, the emancipation of France is the hope and strength of freemen all over Europe. Had she succumbed, the chance of liberty in Italy, in Spain, in Portugal, was indefinitely postponed: in England herself, a sight of much evil omen was held out to both rulers and people. The most imbecile of ministers, and the least trusted by their country, are ever ready to retreat behind the ranks of the army; ever prepared to support their power by force. But no reflecting man can now entertain a doubt, that if our rulers, untaught by the recent lessons, should ever attempt to enforce arbitrary acts by arms, the people of this country would be ashamed of being outdone by those of France in defending their most sacred liberties.

Finally, we take it to be clear, that the honest and generous emulation, which has ever made the two greatest nations of modern Europe run the same race of rivalry in improvement, will now help us in the amendment of whatever defects exist in our institutions. The people of England will not long brook any marked inferiority to their neighbours; and especially will such an eclipse be galling, if it lie in the freedom upon which they have so long prided themselves as their distinguishing and exclusive excellence. France has now a freer government than England. This truth must be told. Shall we not make such improvements as may restore us to our pristine station, and regain for us what Milton called "our prerogative of teaching the nations how to live?" The people have but to will it, and the thing is done. Such ministers as the present, have at least the recommendation of utter inability to resist the tide of popular opinion. They are, it is true, wholly unfit to lead the public sentiment; altogether impotent to carry through great measures of themselves; but if the country decrees a thing to be done, be it right or be it wrong, they have no power to resist. Reform within certain limits is the right thing which they must

now do, or rather suffer to be done. What though all the present cabinet be deeply pledged against it? What though Sir Robert Peel has of late come forward, somewhat ostentatiously and very needlessly, to deny representatives to the great towns? So did he, for many a long day, refuse the catholics and the dissenters their rights; and in a few weeks continuing quite unconvinced,* as he declared, he, and his principal, himself as stout an enemy to the repeal, came round—right round

* This declaration of Sir Robert Peel is certainly by far the most strange that any public man ever made. He had surely opposed the catholic question, from a conviction that there was more mischief in granting, than in withholding it. Then, if his opinion remained, as he solemnly and repeatedly asserted, unchanged, he was, for some reason or other, induced to grant what it was more mischievous to give than to refuse. What could induce any man to do it? What right had any man to act so? It won't do to say that circumstances were altered—for that is saying that the question is safer given than refused; and he declares his opinion to be unaltered, and that the mischief's preponderate. What, then, *can* Sir Robert Peel have meant? We know very well that his enemies say, he means only that he preferred giving up his opinion to giving up his place. We believe no such thing; and we mean no such thing; but we cannot comprehend what he means, and we believe he had no distinct meaning when he made the very incomprehensible statement. At all events, he must now allow, and he ought in a manly way to say, that he was wrong from the first. For his argument was, that the emancipation was a danger and risk; these are prospective words, and they say that the measure would lead to mischief if carried. Carried it been, what was the future is now the past; no mischief whatever has ensued. Five or six members in England, and as many in Ireland, are catholics; there's the whole evil we have encountered to pacify Ireland! Does Sir Robert Peel say that the evil may yet arrive? Then he should tell us at least how, if not when; or he is like the Jew who waits for the Messiah, (and ought, therefore, says this statesman-like reasoner, be excluded from parliament and from office,) or the Portuguese, who is looking for the return of King Sebastian from Africa. Had he not far better admit, what most men now see, and all men of candour believe he sees, that he was in error from the first? He put himself at the head of a party in church and state which wanted a leader, and had in those days much more power than they now have. And he took their creed with the command. He afterwards found he had paid too dear for the station, and abandoned both, to the great benefit of the country, and his own great and lasting honour. His way of doing so is another matter; so is his wholly inexplicable opposition to Mr. Canning, in 1827. These are the dark parts of his conduct; and these, we take it, never can be cleared up, although farther services and new sacrifices of prejudice may tend to efface them from our memory.

about, and carried the grand measure through parliament, as it was said "*triumphantly*," to the no small benefit of the empire, if not to the immortal renown of the senate or its leaders. So will such men yield again, if the people desire it; perhaps they will even volunteer the measure of reform, in order to keep their places a little longer; and they are surely well worth having at such a price. Religious liberty, received as a *fine* upon renewing the ~~law~~ office one year; law reform for the next year; reform of parliament for a year longer—never sure did landlord make a better bargain, or poor tenant pay more handsomely! It will not be hard to find some fourth fine fit to be exacted when this third year shall be out.

THE END.

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